THEOPHRASTUS
METAPHYSICS

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THEOPHRASTUS — METAPHYSICS

The heron. From Manuel Philes, bestiary in Byzantine verse. Copy dated 1564, written by Ange Vergèce of Crete, illuminated possibly by his daughter. MS. Auct. F. 4. 15, fol. 5v

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THEOPHRASTUS METAPHYSICS

WITH AN INTRODUCTION, TRANSLATION AND COMMENTARY BY

MARLEIN VAN RAALTE

E.J. BRILL
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PREFACE

The history of this book is like that of the best of relationships in that it was started lightheartedly and lasted much longer than foreseen.

Initially serving mainly as a counterbalance to the study of Greek stichic verse, the project was meant to be completed in 1983-1985, during which years the Netherlands Organisation for the Advancement of Pure Research granted me a post-graduate scholarship for that purpose. In the course of time it became increasingly clear that Theophrastus' argument, in spite of the deceptive familiarity of its idiom, defies any easy access to a consistent interpretation—even allowing for its obviously dialectical nature. This made the commentary grow to its present size, my extensively quoting of parallel passages testifying to the experience that without a careful study both of the idiom and of the kind of reasoning involved the purport of the argument remains elusive.

The opportunity offered by Project Theophrastus to present a paper at its 1985 conference at the Institute of Classical Studies of the University of London triggered a choice of focus which is at the base of the present interpretation of the treatise. As if infected by Theophrastus' way of proceeding I have made an attempt to expose each and every question that is posed by the text, and to detect the reasons for preferring one interpretation rather than another—my prevailing criterion being the internal consistency of the argument.

A side-effect of the somewhat unusual set-up of this book might be that it could be used as a kind of sourcebook for Peripatetic idiom; in order to help those who may want to explore this way of making a virtue out of necessity full indices have been provided.

During all these years I had the opportunity to profit from the wisdom and erudition, and certainly did profit from the assistance and support of many people.

First of all I have to acknowledge my indebtedness to the authors of the forthcoming Budé-edition of the *Metaphysics*, and especially to Professor André Laks for generously sending me a copy of their completed manuscript in 1990 (and of a revised version of it in 1992), and for allowing me to make use of their *apparatus criticus* & to incorporate references to their interpretation of the text; in this way we have tried to minimize the drawbacks of our simultaneously working on a treatise which had been waiting for attention for so long. It will be clear that the present work heavily relies on Laks & Most's study especially where the manuscript tradition is concerned.

First in time comes the debt I owe to Professor L.M. de Rijk, who aroused my fascination for the Unmoved Mover and supervised the early stages of my research. Professor J.C.M. van Winden's characteristic tenacity and enviable familiarity with the Greek philosophical tradition helped me to struggle through many a passage of Theophrastus' prose.

Furthermore I profited from comments from Han Baltussen, Professor Anthony Long, and Professor S.L. Radt; larger parts of the manuscript were subjected to the criticism of Professor Richard Sorabji, whose open-mindedness and command of the material were a support to me when needed most. The detailed comments on the first part of the manuscript that were provided by Brill's anonymous reader from Leeds gave me the opportunity to clarify my argument on some points and to remove some unmistakable errors.

Dr R.W. Sharples kindly supplied me with a copy of the notes of a London seminar on the treatise. Thanks to Professor W.W. Fortenbaugh I was able to gain more intimate knowledge of 'our man' through a preprint of the *Sources*. On several occasions I have much enjoyed the agreeable and hospitable atmosphere of Project Theophrastus.

The Leiden Department of Greek offered the context in which this book has been written. Not only did it adapt with precious collegiality the assignment of its many tasks to the fact that the process of writing the commentary defied every deadline, but I also received the support from its individual members. Dr Jan van Ophuijsen generously offered his precise comments on different versions of an ever growing manuscript, while at the same time managing to remove the worst of my offenses against the English language. There are few passages which I did not discuss with Professor C.M.J. Sicking, whose feeling for Greek language and unfailing preparedness to think everything over again and again helped me to keep up my motivation. The final version of this book would have been considerably less readable than it is, and doubtless would still be waiting for completion without the energetic support of Dr Peter Stork who, apart from everything else, exercised his invaluable skill in compiling indices in making both the *Index of Passages Cited* and most of the *General Index*.

The younger branches of the Leiden tree, Michel Buijs, Dr Philip van der Eijk, Ilja Pfeijfer, and—a later sprouting as far as Leiden is concerned—Mieke Koenen cheerfully helped to perform the tedious but far from unnecessary task of checking all quotations.

Like the idiosyncrasies in phrasing and form, all errors that remain are mine.

Finally I want to express my gratitude to Brill Publishers, for their flexibility in making a book out of a manuscript that did not stop changing until the very last minute, and for meeting at such short notice at least this one, last deadline.

I dedicate this book to my parents, in gratitude for their solidarity and their friendship.

Leiden, April 1993

ABBREVIATIONS

BONITZ	H. BONITZ, *Index Aristotelicus.* Berlin 1961.
DENNISTON	J.D. DENNISTON, *The Greek Particles.* Oxford ²1954.
DK	H. DIELS, W. KRANZ, *Die Fragmente der Vorsokratiker.* 3 Vols. Berlin ⁸1956.
Doxogr. Gr.	H. DIELS, *Doxographi graeci.* Berlin 1879.
FHS&G	*Theophrastus of Eresus. Sources for his Life, Writings, Thought and Influence.* edd. & tr. W.W. FORTENBAUGH, P.M. HUBY, R.W. SHARPLES & D. GUTAS. 2 Vols. Leiden 1992.
GILDERSLEEVE	B.L. GILDERSLEEVE, *Syntax of Classical Greek from Homer to Demosthenes.* Groningen ²1980.
GUTHRIE	W.K.C. GUTHRIE, *A History of Greek Philosophy.* 6 Vols. Cambridge 1962-81.
K-G	R. KÜHNER & B. GERTH, *Ausführliche Grammatik der Griechischen Sprache.* II.T.: Satzlehre. 2 Vols. Hannover & Leipzig ³1898.
L-M	*Théophraste,* Métaphysique. ed., tr. & comm. A. LAKS & G.W. MOST. Preprint (1991) of the Budé edition, forthcoming (Paris 1993).
LSJ	H.G. LIDDELL & R. SCOTT, rev. ed. H.S. JONES & R. MCKENZIE, *Greek-English Lexicon.* Oxford ⁹1940.
REALE	G. REALE, *Teofrasto e la sua aporetica metafisica. Saggio di ricostruzione e di interpretazione storico-filosofica con traduzione e commento della 'Metafisica'.* Brescia 1964.
REGENBOGEN	O. REGENBOGEN, "Theophrastos von Eresos." *RE* Suppl. VII (1940) Spp. 1353-1562.
RevOT	*The Complete Works of Aristotle. The Revised Oxford Translation.* ed. J. Barnes. Princeton 1984.
R-F	*Theophrastus* Metaphysics. ed., tr. & comm. W.D. ROSS and F.H. FOBES. Oxford 1929.
RUSCH	*Rutgers University Studies in Classical Humanities* (New Brunswick/London).
SCHMIDT	J.H.H. SCHMIDT, *Synonymik der griechischen Sprache.* 4 Vols. Leipzig 1876-86.
SCHW.	E. SCHWYZER, *Griechische Grammatik.* II. Band: *Syntax und syntaktische Stilistik.* München 1950.
SVF	H. von Arnim, *Stoicorum veterum fragmenta.* 4 vols. Leipzig 1903-24.
TLG	*Thesaurus linguae graecae* (Irvine, California).
TRICOT	*Théophraste,* La Métaphysique. tr. & notes J. TRICOT. Paris 1948.
ZELLER	E. ZELLER, *Die Philosophie der Griechen in ihrer geschichtlichen Entwicklung.* T. II.2, Leipzig ³1879.

[ ] in quotations: change of speaker.

Works by Theophrastus (quoted without mention of the author's name):

Char.	*Characters*	J.M. Edmonds, London/Cambridge, Mass. 1967. R.C. Jebb, J.E. Sandys, London 1909 (repr. New York 1979).
CP	*De causis plantarum*	B. Einarson & G.K.K. Link, London/Cambridge, Mass. Vol. I (Books I-II), 1976; Vols. II (Books III-IV) and III (Books V-VI), 1990.
Fr.	Fragments	(if not in FHS&G: see above) F. Wimmer, Paris 1866.
HP	*Historia plantarum*	A. Hort, London/Cambridge, Mass. Vol. I, 1916 (repr. 1968), Vol. II, 1926 (repr. 1977). S. Amigues, Paris Vol. I (Books I-II) 1988, Vol. II (Books III-IV) 1989.
Ign.	*De igne*	V. Coutant, Assen 1971.
Lap.	*De lapidibus*	D.E. Eichholz, Oxford 1965.
Lass.	*De lassitudine*	F. Wimmer, Paris 1866, 398-401.
Od.	*De odoribus*	A. Hort, London/Cambridge, Mass. 1926 (repr. 1977) = *HP* Vol. II, 325-89.
Piet.	*De pietate*	(if not in FHS&G) W. Pötscher, Leiden 1964.
Sens.	*De sensibus*	G.M. Stratton, London 1917 (repr. Amsterdam 1964).
Sud.	*De sudore*	F. Wimmer, Paris 1866, 403-8.
Vent.	*De ventis*	V. Coutant & V.L. Eichenlaub, Notre Dame/London 1975.
Vert.	*De vertigine*	F. Wimmer, Paris 1866, 401-3.
[Th.] *Sign.*	*De signis*	A. Hort, London/Cambridge, Mass. 1926 (repr. 1977) = *HP* Vol. II, 390-433.

For other abbreviations see LSJ (authors and works) and J. Marouzeau, *L'année philologique* (periodicals), allowing for some customary deviations.

INTRODUCTION

I

The short treatise known as the *Metaphysics* of Theophrastus arguably constitutes one of the most exciting, as well as one of the most curious testimonies to Peripatetic thought. If it leaves us with more questions than answers, this at any rate would not have surprised Theophrastus himself.

Cicero tells us that Theophrastus on his deathbed complained that he was dying just when he had begun to understand things, and reproached nature for endowing crows and deer with a long life, whereas the life of man, who might have profited so much more from it, is such a short one:

> Theophrastus autem moriens accusasse naturam dicitur, quod cervis et cornicibus vitam diuturnam, quorum id nihil interesset, hominibus, quorum maxime interfuisset, tam exiguam vitam dedisset; quorum si aetas potuisset esse longinquior, futurum fuisse ut omnibus perfectis artibus omni doctrina hominum vita erudiretur. querebatur igitur se tum, cum illa videre coepisset, extingui.[1]

Whether or not this anecdote is spurious, it is a telling one—not only insofar as the conviction that everything is for the best is clearly absent, but also because it seems to bring out a certain awareness of being one constituent part of nature amongst others.[2]

---

[1] 34A FHS&G (= Cicero, *Tusc. Disp.* 3.69). The contrast involved in Cicero's use of "autem" concerns Aristotle's more confident view that, taking into account the progress made in a short time ("in paucis annis", i.e., in recent years?—so Humbert), the full perfection of philosophy would be reached before long. (Whatever the reality of this contrast, it seems very likely that Seneca's ascription (*Brev. vit.* I.2) to Aristotle of a standpoint very similar to that which Cicero ascribes to Th. involves "an error for Theophrastus", as Basore (*ad loc.*) has it.)

—I doubt, then, that the tenor of this anecdote is that Theophrastus "[was consoled] by the thought that longer life would have brought perfection", King *ad loc.* (see also Runia (1989) 29, 37 n. 23). Cp. also the complaint in 465.16-20 FHS&G to the effect that once one travels along the wrong road turning back is difficult, or rather almost impossible, since time does not provide opportunity to change (and nature tends to keep to the beaten track).

[2] With regard to animals especially: see 531.12-7 FHS&G (= Porph. *De abst.* 3.25.3) οὕτω δὲ καὶ τοὺς πάντας ἀνθρώπους ἀλλήλοις τίθεμεν [καὶ] συγγενεῖς, καὶ μὴν ⟨καὶ⟩ πᾶσι τοῖς ζῴοις· αἱ γὰρ τῶν σωμάτων ἀρχαὶ πεφύκασιν αἱ αὐταί· λέγω δὲ οὐκ ἐπὶ τὰ στοιχεῖα ἀναφέρων τὰ πρῶτα· ἐκ τούτων μὲν γὰρ καὶ τὰ φυτά· ἀλλ' οἷον δέρμα, σάρκας καὶ τὸ τῶν ὑγρῶν τοῖς ζῴοις σύμφυτον γένος· πολὺ δὲ μᾶλλον τῷ τὰς ἐν αὐτοῖς ψυχὰς ἀδιαφόρους πεφυκέναι, ...

A prominent feature of, e.g., Theophrastus' botanical treatises[1] is the persistent effort made by the author to gain maximum clarity with regard to questions posed, and to make explicit the considerations which may provide a motive for giving one answer rather than another—without omitting such complications as one might meet in the process. This characteristic, of course, is not singular in itself. That posing pertinent questions is all-important for our understanding of the world around us might seem to be no more than a commonplace. Still, the point deserves some attention here, insofar as it seems to be implied by some people that the prominent place occupied in a given text by questions, rather than by the exposition of an answer, would relieve us from the obligation of trying to identify the point of view of the author.[2] Taking into account the perfectly sensible procedure of making ex-

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[1] See e.g. *HP* I.1-2; *CP* IV.1.1-2.1 (and, in fact, book IV *passim*); a good example is Th.' treatment of the question whether a bulb is a root or not in *HP* I.6.9-12, or *CP* I.16.10-3, where he is discussing the question whether nature is to be seen in what grows unaided or in what grows under cultivation.

[2] Which seems to be what ELLIS' argument (1988) amounts to. BATTEGAZZORE (1989) wants to combine these views; on the one hand he ascribes to the treatise "... il taglio aporetico del ... procedimento dialettico, che ... si propone non tanto di risolvere i problemi quanto di sollevare con spirito realistico interrogativi e muovere obiezioni" (54); on the other hand one should apparently not conclude that no information about Th.' views can be derived from the treatise: "Teofrasto non possedeva verosimilmente un piano organizzato, e ad esso la sua *forma mentis*, incline soprattutto a porre sul tappeto ipotesi in concorrenza, di certo non aspirava, ma non di meno tutte le sue critiche e gli interrogativi via via tenacemente sollevati si possono ricondurre a un preciso denominatore il quale, prima e più che con una diversa posizione dottrinale, deve essere identificato con una diversa 'filosofia'. Essa risiede, come testimoniano le sue opere scientifiche, in un'attenzione sempre vigile verso il 'particulare' e il settoriale, verso il fenomeno specifico indagato in ogni suo aspetto morfologico, verso le innumerevoli variabili che determinano la variegata complessità del mondo fenomenico e che, in un certo senso, rendono ogni teoria sempre provvisoria e sempre rivedibile. Quello di Teofrasto è in sostanza un orientamento che mi piace definire deontologico e programmatico, ..." (51); "... Teofrasto corregge il maestro partendo da un punto di vista aristotelico e ponendo le basi per confutare quanto in Aristotele era rimasto di platonico" (53); cp. also 56.

When Th. applies his critical attitude to the problem of the principles of nature, not to under-shrubs this time but to being as a whole, with the effect described by BATTEGAZZORE, it seems about time to stop referring to the aporetic character of the treatise as if that would prove that the only information it provides about the author's point of view is that he was inclined to ask pertinent questions. Even if Th. would have been devoid of any systematic interest (but see Section V below), it still is quite possible that the answers suggested by him do have systematic significance (or, at least implications). *Contra* BATTEGAZZORE 56 "la posizione critica assunta nel frammento metafisico verso le aspirazioni *sistematiche e* finalistiche della scienza platonica-aristotelica si configura come una cornice coerente dell' attività di Teofrasto come scienziato, impegnato a tutt'uomo nelle ricerche fisiche e botaniche." (italics added); also LENNOX (1985) 145 "While it is unlikely that we shall learn much about Theophrastus' considered views on the nature of teleology from this discussion, we shall learn a good deal about the sorts of teleological explanations that he found problematic." Cp. STEINMETZ (1964) 116, p. 3 n. 3 below.

plicit the questions raised by the subject-matter itself or by the conceptions of one's predecessors, one should preserve the greatest possible conceptual clarity when classifying specimens of scientific prose as 'aporetic'.[1]

A similar caution is due when qualifying a text as 'dialectical'. An argument does not cease to be fertile as soon as questions are asked and tentative anwers given (and, if necessary, rejected). The advantage of laying bare in front of an audience one's thoughts in all its ramifications (putting into words what may be called a 'dialogue intérieur')[2]—a way of proceeding which seems to have been practiced with virtuosity by Socrates whenever the interlocutor was inclined to give up the struggle, and was made into a principle of argumentation either by Plato or by Socrates himself—is precisely that the hearer (or reader) may agree or disagree in the course of the argument (and, in the case of a hearer disagreeing, may even interfere); and it could be argued that in the case of such a self-conscious procedure as 'dialectical' reasoning the interpreter who is outside the immediate audience is nothing less than obliged to search for any inclination on the part of the author to agree with one kind of answer rather than with another.[3]

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[1] The term ἀπορία designates what may be characterized as ἄλογον or ἄτοπον, i.e. what cannot be reasonably accounted for: see *ad* 7 a 10. For the role of discussing ἀπορίαι in the process of acquiring knowledge, see 8 b 12-6 (with commentary *ad loc.*).

Little clarity seems to be gained by distinguishing different types of ἀπορία according to differences as to the aim involved, as L-M do: "[Une difficulté] peut être au service de la critique, pour écarter une thèse; elle peut aussi être cathartique, visant à clarifier les malentendus auxquels une doctrine a pu donner lieu; elle peut constituer un moment préalable de l'élaboration d'une position originale; elle peut, enfin, être l'expression d'un doute plus radical, et n'appeler aucune réponse. Théophraste, qui, semble-t-il, a volontiers pratiqué la forme de l'aporie, a joué de ces différents registres, critique, exégétique, zététique et peut-être même hyperbolique." [12]. In the present treatise, "la plus grande partie des questions posées par Théophraste ont beaucoup plus à voir avec la gestation d'un programme et d'une méthodologie de recherche qu'avec la critique d'une doctrine constituée. ... ses apories sont essentiellement zététiques, même si certaines présentent un autre caractère." [17].

[2] See e.g. *CP* IV.6.5 ff. φαίνεται δὲ τοῦτό γε καὶ ἄλλως ἀληθές· ... . τί οὖν, ἴσως ἄν τις φαίη, κωλύει καὶ ἐπὶ τῶν ἀπορουμένων τοιοῦτόν τι συμβαίνειν ὥστε καὶ ... ; (6) ἢ τοῦτο παράλογον, ὡς ... ; (7) συμβαίνει γὰρ ... . πλὴν εἴ τις λέγοι ὅτι ... . συμβαίνει μὲν δὴ τοῦτο ... . ἐπεὶ τό γε ..., ἄλλως τε καὶ ..., ἧττον θαυμαστόν· ... . ἐκεῖνο γὰρ ἔτι θαυμασιώτερον, ὅπερ εἴρηται περὶ ..., ὅτι ... . (8) ἔστι δὲ καὶ ... τοιοῦτον ... . τὸ δὲ ...· σκεπτέον δ' ὑπὲρ αὐτοῦ. εἰ δ' οὖν οὕτως ἔνια ..., δῆλον ὅτι ..., διὸ καὶ αὕτη τις ἂν εἴη συνεργοῦσα πίστις. ἀντιβαίνει δ' αὐτῇ τὸ καὶ πρότερον λεχθέν, ὅτι ...

[3] *Contra* Ellis (1988); see also commentary *ad* 7 a 22 – b 2; 7 b 2-5 ; 10 a 10-6. Cp. Steinmetz (with reference to *Ign.*) "nicht alles, was Theophrast in der Form der Frage formuliert, stellt er in Frage; die Fragekette ist vielmehr die von ihm besonders gepflegte Form des Argumentierens. In ihr wird der Fortschritt des Gedankengangs nur sichtbar, wenn man die ganze Kette überschaut." (1965) 116.

This is not to deny that, in the context of the Peripatos especially, a peculiar kind of scientific prose may be distinguished which is characterized by a marked explicitness with regard to the different steps in the argument, and by what may be called 'programmatic' statements, summarizing what has been made clear and what requires further investigation. A text of this type often begins with formulating some question—to that extent, and in that sense, it may be called aporetic—and proceeds to discuss possible answers—to that extent, and in that sense, it may be called dialectical—making use of a comparatively unified terminology, and is written with the obvious aim of gaining insight into whatever its subject-matter may be.

Very broadly the mode of argumentation may be characterized as follows. A problematic issue, introduced e.g. by τίς, διὰ τί, πῶς, ποῖον, &c.,[1] is posed, frequently characterized as being ἄλογον, παράλογον, ἄτοπον (or introduced by a formula like ἀπορήσειεν, ζητήσειεν ἄν τις, often with the addition of τάχα or ἴσως),[2] and often followed by the ground for posing the question in this particular context (introduced by γάρ, ἐπειδή ...);[3] possible answers may be advanced (sometimes in pairs of alternatives: πότερον ... ἢ ...), frequently presented as plausible (εὔλογον, οὐκ ἄλογον, εἰκός—or as more plausible than their alternatives: εὐλογώτερον),[4] often because they are considered to be in accordance with other suppositions or observations.[5]

---

[1] The fact that Aristotle conveniently listed these types of questions (partly coinciding with his categories) of course does not preclude that there is a scientific interest in posing (and trying to answer) them—quite the contrary, *pace* Cicero, *Orat.* 46. Cp. MANSFELD (1990) 3193 ff., esp. 3197 n. 659. One may compare the series of aspects according to which 'sameness' can be recognized in 9 a 4-6 (οὐσίᾳ, ἀριθμῷ, εἴδει, γένει, ἀναλογίᾳ; cp. 4 b 7-8), where καὶ εἰ ἄρα παρὰ ταῦτα διαιρέσεις presumably refers to such categories as time and place not included in the series.

[2] See *CP* I.13.2 ἐκεῖνο δ' ἄν τις ἴσως ἐν τούτοις ἀπορήσειεν· πότερα ... ἢ ...; τοῦτο μὲν οὖν ὡς καθ' ὑπόθεσιν θεωρείσθω. I.16.3 τάχα δ' ἄν τις ἀπορήσειεν ἐκεῖνο, ... See *ad* 5 b 10.

[3] *CP* I.16.10 ἐξ αὐτοῦ δὲ τούτου τάχ' ἄν τις πάλιν ἀπορήσειεν κοινήν τινα ἀπορίαν καὶ καθόλου, πότερα τὴν φύσιν ἐκ τῶν αὐτομάτων μᾶλλον θεωρητέον ἢ ἐκ τῶν κατὰ τὰς ἐργασίας, ... ἡ μὲν γὰρ φύσις ἐν αὐτῇ τὰς ἀρχὰς ἔχει, καὶ λέγομεν τὸ ⟨μὲν⟩ κατὰ φύσιν (...), τὸ δ' ἔξωθεν, ἄλλως τε καὶ κατὰ τέχνην, ἀφ' ἑτέρας γὰρ ἀρχῆς. *CP* IV.4.1 ἄτοπον δ' ἂν δόξειεν καὶ ἅμα θαυμαστόν, εἰ ἀπὸ τῶν ἀτελῶν ἔνια γεννᾷ, ...· ἀτελὲς γὰρ τὸ ὠμόν. IV.15.1 ἡ δὲ φύσις αὐτῶν, ποία τις ἂν εἴη, σκεπτέον. οὐδὲ γὰρ γεώδης ... Also IV.5.4, p. 5 n. 4 below. Cp. 4 a 3, 7 b 11, 9 b 4.

[4] *CP* IV.11.1 μάλιστα δ' ἐπὶ τῶν εἰρημένων ... αἱ διαφοραί, καὶ τοῦτο εὐλόγως· τὰ μὲν γὰρ ὄσπρια, σπαρέντα χειμῶνος, οὐκ ἂν ὑπομείνειεν διὰ τὴν ἀσθένειαν (πλὴν εἴ τινων ὀλίγων· ... γὰρ ...). Also IV.12.10-2. See *ad* 4 a 13.

[5] This kind of observations is often advanced in a relative sentence of the type διὸ (δὴ) καί: see *ad* 4 a 6; sometimes ᾗ καί has a similar value: see 9 b 1; also ὅθεν καί, below. (Cp. *ad* ἀφ' ἧς καί 5 b 4; also καὶ γὰρ δή, *ad* 10 a 7-8.) See e.g. *CP* IV.3.3 ὅλως δ' (ὡς γένει λαβεῖν) ξηρότατα τῶν σπερμάτων τὰ στεφανωματικὰ καὶ τὰ τῶν λαχάνων, ὅθεν καὶ τάχιστα τὰς ἰκμάδας ἕλκει, διὸ καὶ κρεμαννύουσιν αὐτοῦκαὶ οὐ ῥαίνουσιν τὰ οἰκήματα, οὐδ' ὕδωρ εἰσφέρουσιν ἁπλῶς.

Further considerations (e.g. of a similar or more general nature (introduced e.g. by ὁμοίως δέ; τὸ δ' ὅλον, ὅλως δέ)[1] may be added. In the meantime the argument at every stage may meet with objections (καίτοι, ἀλλά),[2] proviso's (πλὴν ὅτι, πλὴν εἰ, πλὴν ἴσως)[3] or second thoughts,[4] or may be supported by corroborating evidence, such as previous statements or theories on the subject,[5] reports e.g. from specialists[6] or observations *in situ*,[7] examples or comparisons (such as analogies).[8] The conclusion (often introduced by μὲν

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[1] E.g. *CP* IV.3.3 (2: θαυμαστὸν δ' ἂν δόξειεν τὸ τοῦ ἀβροτόνου μάλιστα διότι θερμὸν ὂν τὴν ἀλέαν διώκει· αἰτία δὲ ἡ ἀσθενεία· ...) τὸ δ' ὅλον οὐκ ἔοικεν ἡ θερμότης μάλιστα εὐβλαστεῖν, εἴπερ θερμὰ τὰ δριμέα· καὶ γὰρ τὸ πράσον καὶ τὸ γήτειον καὶ ἔτι μᾶλλον ἡ θύμβρα καὶ ἡ ὀρίγανος δυσβλαστῆ· δεῖ γὰρ ἔχειν τινὰ ὑγρότητα, καὶ οὐχ ἧττον, ἀλλὰ μᾶλλον ἴσως, εὐκρασίαν τὸ εὐβλαστὲς πρὸς τὸ ποιεῖν καὶ πάσχειν. *Sens.* 51; 53 (ὅλως δὲ ἄτοπος ἡ τοῦ ἀέρος τύπωσις); *Od.* 36 διὰ τί δὲ τὸ ἴρινον εὔοσμον μὲν οὐ ποιεῖ δὲ τὴν ὀρμήν; ἢ διότι ... ; ἀλλὰ καὶ .... τὸ δὲ ὅλον ..... ἡ δ' αἰτία πάντων ὡς καθόλου εἰπεῖν .... ταῦτα μὲν οὖν ...

[2] *CP* I.16.12 ἀλλ' ἐκεῖνοι μὲν ..., ἡ δὲ .... V.3.6 μέγα δ' οὖν πρὸς πίστιν τῆς μεταβολῆς τὰ παρὰ τὰς χώρας, ...· ἀλλὰ τὸ οὕτως ἐν βραχεῖ χρόνῳ καὶ ταχέως ἄπιστον, εἰ μή τις ἄμφω ταῦτα συνθήσει· .... IV.1.5 καίτοι τάχ' ἄν τις ἀντείποι περὶ τοῦ πλήθους, φάσκων .... VI.16.1 καίτοι, διὰ πέψιν γινομένης τῆς ὀσμῆς, προσῆκεν εὐοσμεῖν τὰ μάλιστα πεπεμμένα. *Vent.* 25 τοῦτο δὲ δῆλον, ὅτι .... καίτοι φασί γε .... τοῦτο μὲν οὖν ἐπισκεπτέον.

[3] *CP* IV.1.6 (...)· πλὴν ὅτι τὰ μὲν εἰς τὸ χεῖρον αἰεὶ μεταβάλλει, ... IV.4.4 (...) πλὴν ἴσως ἄλλοις ἄλλη καὶ ὕλη καὶ τροφή, ... IV.11.1, p. 4 n. 4 above. Cp. also IV.3.6 φαίνεται δ' οὖν, εἰ τοῦτο ἀληθές, ὅτι ταχυγονώτερα τὰ παλαιότερα (sc. σπέρματα)· μεμῖχθαι γάρ ... IV.4.1 ἆρ' οὖν, εἴπερ τοῦτ' ἀληθές, διαιρετέον ... ; ... καὶ ταῦτα μὲν ὡς πρὸς ὑπόθεσιν.

[4] See e.g. *CP* IV.4.12 n. 6 below; V.3.6 εἰ μή τις ἄμφω ταῦτα συνθήσει, n. 1 above; also VI.17.11 ἀλλ' ἐκεῖνο ἄτοπον (...), εἰ .... τάχα δ' οὐ ἄτοπον· ὁρῶμεν δ' οὖν ... A characteristic feature of this kind of text, and perhaps a characteristic way of phrasing of Th. in particular, are clauses introduced by εἰ δὲ μή, εἰ μὴ ἄρα, or, after a negative statement, ἀλλ' εἴ περ, in which a possibility just rejected is given serious consideration. E.g. *CP* IV.5.4 ἄτοπον δὲ καὶ λόγου δεόμενον εἰ καὶ τὸ λίνον ἐξαιροῦται, μεγάλη γὰρ ἡ διάστασις· εἰ μὴ ἄρα καὶ τοῦτο τῆς τροφῆς ὁλκόν, φιλεῖ γοῦν χώραν ἀγαθήν, ὥστ' ἐκ τῆς ὑπερβολῆς ἡ διάστασις.; also IV.8.4. See *ad* 4 b 10.

[5] The role of previous theories naturally increases according as data of observation are lacking; in this sense there is a natural link between the study of principles and doxography. Cp. IV.2, 7 a 6 ff. (preceded by a systematic classification in IV.1, 6 b 23 ff.).

[6] *CP* IV.4.11 f. ἔτι δὲ καί φασιν οἱ ἔμπειροι φανερὸν εὐθὺς εἶναι τὸ φύλλον ἀνατέλλον τῆς αἴρας, λιπαρώτερον ὂν ..., καὶ οὐχ ὕστερον τοιοῦτον γινόμενον. (12) ἐκ μὲν οὖν τούτων δόξειεν ἂν ⟨ἐν⟩ τοῖς σπέρμασιν. οὐ μὴν οὐδὲ θάτερον ἀδύνατον, οὐδ' ἄλογον, ὥστε ἐν τῇ χλόῃ μεταβάλλειν, ἀλλοιουμένων τῶν ῥιζῶν (τοῦτο γὰρ ἀνάγκη συμβαίνειν, εἴπερ ἅπαν ἀπὸ τῆς ἀρχῆς ἄρχεται). Cp. *Lap.* 19-22. For a rejection of what "some people" assert see *Lap.* 9-10; cp. 11 a 18-22.

[7] See *HP* I.1.5; cp. *CP* IV.4.8 αἱ μὲν οὖν ἐναντιώσεις αὗται δοκοῦσιν ἐλέγχεσθαι τοῖς ἔργοις (πολλοὶ γάρ, ὥς φασι, σπείραντες πυροὺς ἢ κριθὰς ἐθέρισαν αἴρας). *HP* VIII.6.3 ἐνιαχοῦ δὲ οὐ ξυμφέρειν βαθεῖαν ἀροτριᾶν, ὥσπερ καὶ ἐν Συρίᾳ, δι' ὃ μικροῖς ἀρότροις χρῶνται. παρ' ἄλλοις δὲ τὸ λίαν ἐξεργάζεσθαι βλάπτει, καθάπερ ἐν Σικελίᾳ, δι' ὃ καὶ τῶν ξένων ὡς ἔοικε πολλοὶ διαμαρτάνουσι.

[8] *CP* IV.4.11 ὅθεν καὶ τοῦτο ἂν εἴη φανερόν, εἴ τις ἀκολουθήσει τῇ ἀναλογίᾳ· διότι τῇ τῶν σπερμάτων ἀλλοιώσει, καὶ οὐ τῇ τῆς χλόης μεταβολῇ· καὶ γὰρ ἐπὶ τῶν ζῴων οὕτω γίνεται. See *ad* 4 b 12-3.

οὖν)[1] may be expressed by a perfect tense (ἀφώρισται ...) or by ..., δῆλον, ..., φανερόν or the like, frequently with the qualification that the question has been answered only partially;[2] complications or further questions may be dismissed to another occasion (frequently by making use of the verbal adjective).[3] A more or less related problem to be discussed next is introduced by means of ... δὲ καὶ ...,[4] or, if merely presented as a further point, ἔτι δέ ...[5] Sometimes the relation to the previous question is made explicit (e.g. the present one may be prior to or otherwise more important than the previous one;[6] more general, more specific,[7] or involving a more curious situation;[8] the subject-matter may be more basic in some respect: περὶ αὐτὸ τὸ ...).[9]

Anyone interested in any more positive point of view which the author of such a text might have had will first of all heed the assertions marked as εὔλογον &c., or on the contrary ἄλογον, παράδοξον &c. This approach seems all the more promising as the idea is apparently that propositions are reasonable or probable in proportion to their being in accordance, not only with data of observation, but also with other propositions which are con-

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[1] *CP* IV.14.5 ταῦτα μὲν οὖν καὶ τὰ τοιαῦτα καθάπερ νοσήματος ἔχει χώραν, ὑπὲρ ὧν οὐ χαλεπὸν τὰς αἰτίας ἰδεῖν. VI.8.7 περὶ μὲν οὖν τῆς τοῦ ἐλαίου γενέσεως τοιαύτην τιν' ὑποληπτέον τὴν αἰτίαν.

[2] See e.g. formulas such as ἀρκείτω τὰ εἰρημένα (*CP* IV.5.5, n. 4 below). Cp. IV.7.7 καὶ τὰ μὲν περὶ τὴν ἔκφυσιν οὕτως ἄν τις διέλοι. IV.10.3 καὶ περὶ μὲν τῶν πρὸς ἄλληλα διαφορῶν τοσαῦτα εἰρήσθω.

[3] E.g. σκεπτέον δ' ὑπὲρ αὐτοῦ *CP* IV.6.8, p. 3 n. 2 above; also IV.15.1; IV.6.9 ἀλλὰ περὶ μὲν τούτων ἐπισκεπτέον. (also IV.13.1); IV.12.2 ὑπὲρ δὴ τούτων, καὶ εἴ τι ἄλλο συνάπτει πρὸς τὴν ἀπορίαν ταύτην, πρῶτον ἐκεῖνο λεκτέον· ὅτι .... (12.3) διαιρουμένου δ' οὕτω ..., σκεπτέον παρὰ τίνας καὶ ποίας τινὰς αἰτίας ταῦτα συμβαίνει. VI.9.4 τούτου μὲν οὖν τὴν αἰτίαν ὕστερον λεκτέον. The occurrences in the *Metaphysics* are listed *ad* 4 b 7.

[4] *CP* IV.5.5 σκεπτέον δὲ καὶ εἴ τι ἄλλων σπερμάτων, ἢ τῶν ἀγρίων ἢ τῶν ἡμέρων, δέχεται τὴν τοιαύτην ἀλλοίωσιν. καὶ περὶ μὲν αἰρῶν ἀρκείτω τὰ εἰρημένα. 13.6 ἀπορεῖται δὲ καὶ διὰ τί, ... Somewhat differently IV.6.2 ἔχει δέ τινα καὶ ἄλλως ἀπορίαν ἡ παρ' ἔτος βλάστησις· ...

[5] E.g. *HP* I.6.9; *Vent.* 33. See *ad* 10 b 7.

[6] E.g. *CP* IV.6.9 μεῖζον δ' ἔτι τῶν παρὰ τὰ σπέρματα καὶ τοὺς καρποὺς ἀπορημάτων (οὐχ ὑποπίπτοντα δὲ ὑπὸ τὴν αἰτίαν ταύτην) τὸ περὶ τὸν λωτὸν συμβαῖνον. Cp. also 5 b 19 ff.

[7] *CP* IV.11.8 ἀλλὰ γὰρ τοῦτο μὲν καθόλου καὶ κοινόν. αἱ δὲ τῶν σπερμάτων διαφοραὶ γίγνονται ... VI.10.2-3 καθόλου μὲν οὖν τοιαύτη τις ἡ αἰτία. ... (3) ὅλως δὲ ἐν τοῖς καθ' ἕκαστα καὶ ἐν τοῖς παρακολουθοῦσιν καὶ τὰ τοιαῦτα δόξειεν ἂν συμφωνεῖν· οἷον ὅτι ...

[8] *CP* IV.4.1-2 ἄτοπον δ' ἂν δόξειεν καὶ ἅμα θαυμαστόν, εἰ .... (2) ἐκεῖνο δὲ ἀτοπώτατον, εἰ ...

[9] E.g. *HP* I.1.9 αὐτὰ δὲ τὰ μέρη διαριθμησαμένους πειρατέον περὶ ἑκάστου λέγειν. See *ad* 4 b 4.

sidered probable.[1] This implicit application of the conception that truth is characterized by coherence—which again can be traced back to Plato's Socrates, who does not tire of stressing the importance of a harmony between one's assertions—should keep us, I think, from being too sceptical with regard to the possibility of finding out the point of view which the author in question, all things considered, is likely to have preferred.

These considerations, even if they seem familiar in themselves or indeed self-evident, may help us to gain insight into some controversial aspects of Theophrastus' *Metaphysics.*

II

The treatise is a short one. It is nevertheless, according to what may fairly be described as a *communis opinio*, complete.[2]

This view presupposes a position with regard not only to the title under which the treatise is transmitted, which reads ΘΕΟΦΡΑΣΤΟΥ ΤΩΝ ΜΕΤΑ ΤΑ ΦΥΣΙΚΑ,[3] but also to the characterization offered by the only testimony we have for the early history of our treatise, namely the scholion added to the text in some of the manuscripts,[4] which presents many puzzles of its own:

> τοῦτο τὸ βιβλίον Ἀνδρόνικος μὲν καὶ Ἕρμιππος ἀγνοοῦσιν, οὐδὲ γὰρ μνείαν αὐτοῦ ὅλως πεποίηνται ἐν τῇ ἀναγραφῇ τῶν Θεοφράστου βιβλίων· Νικόλαος δὲ ἐν τῇ θεωρίᾳ τῶν Ἀριστοτέλους Μετὰ τὰ φυσικὰ μνημονεύει αὐτοῦ, λέγων εἶναι Θεοφράστου. εἰσὶ δ' ἐν αὐτῷ οἷον προδιαπορίαι τινὲς ὀλίγαι τῆς ὅλης πραγματείας.

The conclusion to the treatise (IX.4, 11 b 24 ff.) offers some ground for its characterization by the scholiast[5] as προδιαπορίαι τινὲς ὀλίγαι insofar as the study of the universe is said to require further discussion, implying that the questions discussed so far might be considered as preliminary; on the other hand, if τῆς ὅλης

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[1] *CP* IV.11.4 ἄτοπον δὲ καὶ ὑπεναντίον τὸ συμβαῖνον εἰ ... . *Sens.* 31 τὸ δὲ μετὰ λύπης ἅπασαν εἶναι οὔτ' ἐκ τῆς χρήσεως ὁμολογεῖται, τὰ μὲν ⟨γὰρ⟩ μεθ' ἡδονῆς τὰ δὲ πλεῖστα ἄνευ λύπης ἐστίν, οὔτ' ἔστι τῶν εὐλόγων. ἡ μὲν γὰρ αἴσθησις κατὰ φύσιν, οὐδὲν δὲ τῶν φύσει βίᾳ καὶ μετὰ λύπης, ἀλλὰ μᾶλλον μεθ' ἡδονῆς, ὅπερ καὶ φαίνεται συμβαῖνον. τὰ γὰρ πλείω καὶ πλεονάκις ἡδόμεθα καὶ αὐτὸ δὲ τὸ αἰσθάνεσθαι χωρὶς τῆς περὶ ἕκαστον ἐπιθυμίας διώκομεν. *CP* IV.11.10 σύμφωνον δὲ τρόπον τινὰ καὶ οὐ πόρρω τούτων καὶ ... Cp. also VI.11.4. Cp. AUBENQUE (1961); BALTUSSEN (1992) 3-8, 15-6.

[2] See R-F p. x. The habit of referring to the text as the 'metaphysical fragment' is, however, persistent. See e.g. BATTEGAZZORE (1989) 56, p. 2 n. 2 above.

[3] ΤΩΝ om. CL; ΤΑ om. P (this manuscript, however, like all the other MSS. reads τὰ in the subscription to the treatise).

[4] The oldest of them being Parisinus gr. 1853 (10th century, L-M [41]).

[5] See L-M [9-10], who think it possible that the remark derives from a glossator, possibly betrayed by οἷον.

πραγματείας means that these questions are introductory to "the treatise as a whole", he is obviously mistaken.[1] It may be argued, however, that πραγματεία is used here in the less concrete sense of 'study'[2] involving a treatment of the subject: compare e.g. Arist. *EN* 1103 b 26-30 ἐπεὶ οὖν ἡ παροῦσα πραγματεία οὐ θεωρίας ἕνεκά ἐστιν ὥσπερ αἱ ἄλλαι (οὐ γὰρ ἵνα εἰδῶμεν τί ἐστιν ἡ ἀρετὴ *σκεπτόμεθα*, ἀλλ' ἵν' ἀγαθοὶ γενώμεθα, ἐπεὶ οὐδὲν ἂν ἦν ὄφελος αὐτῆς), ἀναγκαῖον *ἐπισκέψασθαι* τὰ περὶ τὰς πράξεις, πῶς πρακτέον αὐτάς· ...

As for the title attached to the treatise, given that the final paragraph of the text presents itself as a preliminary to further investigations, anyone at any time may have misunderstood the programmatic nature of this conclusion, and may have given this title on the supposition that there must have been more than we have.

In any case, the question how the tantalizing conciseness of the argument should be explained, and more generally that of the original function of the text, have not been settled.

I submit that two prominent features of the treatise indicate that the original manuscript was for private use: (1) the brevity of expression, which sometimes appears to offer no more than indications of topics or examples to be remembered by the author,[3] and (2) the lack of explicitness of references

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[1] It is sufficient to suppose that the scholiast failed to recognize the programmatic nature of the conclusion; he did not necessarily misinterpret αὕτη ... ἀρχὴ τῆς τοῦ σύμπαντος θεωρίας in 11 a 27 – 12 a 1 as though referring to what precedes, as L-M [10] do.

[2] As is the case in 9 b 18.

[3] See esp. 5 a 17, 5 a 23, 5 a 27-8, 6 b 10-1, 6 b 15-6, 7 a 3-4, 8 a 2, 9 a 22-3, 11 a 13, 11 a 22-3. As these examples show, this does not merely amount to a brevity of wording as indicated by Themistius *In De An.* 108.8-10 (307A.17-21 FHS&G): καὶ τὰ ἐφεξῆς μακρὸν ἂν εἴη παρατίθεσθαι καίτοι μὴ μακρῶς εἰρημένα, ἀλλὰ λίαν συντόμως τε καὶ βραχέως τῇ γε λέξει· τοῖς γὰρ πράγμασι μεστά ἐστι πολλῶν μὲν ἀποριῶν, πολλῶν δὲ ἐπιστάσεων, πολλῶν δὲ λύσεων. ἔστι δὲ ἐν τῷ πέμπτῳ τῶν Φυσικῶν, δευτέρῳ δὲ τῶν Περὶ ψυχῆς, ἐξ ὧν ἁπάντων δῆλόν ἐστιν, κ.τ.λ. "L'examen des fragments littéraux cités chez Thémistius et Priscien montre que Thémistius a parfaitement discerné les caractères essentiels de l'ouvrage", Moraux (1978) 314 n. 2

It may be noted here that, whereas one such 'shorthand' insertion by itself justifies the hypothesis that the text in question was meant for private use (or for internal use within some intellectual community), the polished nature of a prose text cannot reasonably be adduced as evidence for the fact that a particular text was meant for a more general public; *contra* Schütrumpf: "Ich teile die allgemein vertretene Auffassung, dass ein Text, auf den der Autor die Mühe stilistischer Durcharbeitung verwandt hat, letztlich literarischen Ansprüchen genügen sollte und somit für Publikation gedacht war, und dass ein Text, dem dies abgeht, nicht den Grad an Durcharbeitung erreicht hat, der ihn für die Veröffentlichung empfahl, so dass dafür die Hypothese des Vorlesungsmanuskripts eine gewisse Plausibilität besitzt." (1989) 181; "Selbst wenn also die Pragmatien aus Vorlesungen hervorgegangen sein sollten, so ist dieser Charakter, Vorlesungsmanuskript zu sein, in den hier betrachteten Passagen [sc. from Arist. *Pol.*] nicht mehr erhalten, die stilistische Durcharbeitung stellt diese Werke den uns bekannten zeitgenössischen, durch Publikation veröffentlichten zur Seite. Und die Art der Präsentation des Materials in manchen Pragmatien lässt es ausgeschlossen erscheinen, dass hier je Vor-

to other theories, especially Academic and Peripatetic.[1] Furthermore, seeing that the argument shows several characteristics of a 'dialogue intérieur' as outlined above, the size of the audience may have varied from zero[2] to a considerable number,[3] on the understanding that the larger—or in any case the less expert—the audience, the less likely that the text as we have it reflects the form and length of an eventual performance.

Since research in the context of the school practice of the time presumably never was a private enterprise, it seems plausible that the text served some purpose in the context of Peripatetic debate of some kind. Taking into account a certain degree of continuity in the argument,[4] and the programmatic nature of the first and the last paragraphs especially, it seems safe to infer—in the light of the idiosyncrasies indicated above—that it was composed by Theophrastus for his own use in the context of some form of public lecture or course.[5]

III

One thing we are certain of is that the title *Metaphysics* does not derive from Theophrastus himself. It may have been attached to the treatise at any time after Aristotle's work was given that name (i.e., presumably, after the putative[6] editorial activity of Andronicus in the first century BC),[7] in view of the

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lesungsmanuskripte zugrunde gelegen haben." (191). Apart from the fact that in Greek chiasmus, for instance, simply may serve the clarity of presentation, and thus may be a feature of discourse rather than of style (see SLINGS (1993) 30-3), the wish to express things well, and the satisfaction of doing so, is not likely to be limited to what is meant for 'publication'—especially in a society where what sounds well traditionally has the ring of truth.

[1] E.g. the introduction of the unmoved mover as the object of desire in 5 a 2 ff., of the use of ἐνέργεια linked with οὐσία 5 a 7, of the concept of μίμησις in 5 a 25 (cp. 8 a 1), of the material principle as τὸ δυνάμει ὄν, 8 a 10-1, and of πλεοναχῶς λεγόμενα, 9 b 1 (cp. 9 a 10); furthermore the brevity of the references to Speusippus' theory especially 6 b 5-6, 11 a 23-5, and the lack of explicitness in Ch. III in general.

[2] Cp. Arist. *Met.* 1006 b 7-10 τὸ γὰρ μὴ ἓν σημαίνειν οὐθὲν σημαίνειν ἐστίν, μὴ σημαινόντων δὲ τῶν ὀνομάτων ἀνῄρηται τὸ διαλέγεσθαι πρὸς ἀλλήλους, κατὰ δὲ τὴν ἀλήθειαν καὶ πρὸς αὑτόν· οὐδὲ γὰρ ἐνδέχεται νοεῖν μὴ νοοῦντα ἕν, κ.τ.λ.

[3] Cp. the famous anecdote in Plutarch (15 FHS&G): ὁ δὲ Ζήνων ὁρῶν τὸν Θεόφραστον ἐπὶ τῷ πολλοὺς ἔχειν μαθητὰς θαυμαζόμενον, "ὁ ἐκείνου χορός", ἔφη, "μείζων, οὑμὸς δὲ συμφωνότερος." Cp. D.L. V.37.

[4] Which I have tried to maximize in the summary, section IV below.

[5] Cp. WEHRLI (1983) 479: "Die skizzenhafte Form spricht dafür, dass die Schrift als Unterlage für die Einleitung einer Vorlesung gedient hat."

[6] All that can be maintained with confidence is that Andronicus "made a catalogue of the writings of Aristotle and Theophrastus and edited at least some of Aristotle's works" GOTTSCHALK (1972) 338.

[7] See e.g. PATZIG (1960/1) 203 "[das vieldiskutierte Faktum] dass unsere Schriftensamm-

affinity of the topics treated, and, more particularly, in view of the first sentence of the treatise itself. In fact it is not unlikely that the treatise was kept in the school library together with Aristotle's *Metaphysics*—even before that work was given this title—, perhaps even by Theophrastus himself.

This seems to provide a sufficient explanation for Nicolaus' mentioning the treatise in "his treatise concerning Aristotle's *Metaphysics*"; the hypothesis that Andronicus did know the treatise but conceived it as a part of Aristotle's *Metaphysics* is not required to account for this.[1]

However this may be, if Andronicus knew the treatise, it seems quite unlikely that he thought it to be the *introduction* to the *Metaphysics* of Aristotle;[2] in that case he must, at least, have been completely unaware of its critical intent, which on two topics is undisputable.[3] If it was conceived as an appendix,[4] it seems less curious that the treatise should have been ascribed to Aristotle, testifying to his second thoughts on the unmoved mover, supposedly dating from the period in which he developed his theory of the σύμφυτον πνεῦμα.[5]

It does not seem unlikely, then, that in the first century BC the treatise was kept in the same 'file' as Aristotle's *Metaphysics*. Andronicus may have

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lung ihren Titel 'τὰ μετὰ τὰ φυσικά' erst um 60 v. Chr. von Andronikos von Rhodos in seiner Gesamtausgabe der Schriften des Aristoteles erh[ie]lt.". But "In Wahrheit gibt das wohl von einem vor Andronikos lebenden Peripatetiker gebildete Wort das Grundmotiv der 'ersten Philosophie' im ursprünglichen Sinne vollkommen treffend wieder.", Jaeger (1923) 404; Moraux (1951) 246 f.; Drossaart Lulofs (1969) 29. Reiner (1954) 235 thinks that the title may have originated from Eudemus (the term being in agreement with Aristotelian concepts).

[1] As L-M [9] imply. It may be noted that Porphyrius' characterization of his activities: τὰ Ἀριστοτέλους καὶ Θεοφράστου εἰς πραγματείας διεῖλε τὰς οἰκείας ὑποθέσεις εἰς ταὐτὸν (sc. βιβλίον?) συναγαγών, FHS&G 39 = Porphyrius *Vita Plotini* 24) seems to imply that Andronicus performed this task for each author separately, the idea being apparently that he did for Aristotle's and Th.' works what Apollodorus did for those of Epicharmus (and what Porphyry himself had considered doing for the works of Plotinus).

[2] As L-M [9] have it. In Vind. phil. gr. 100 (and in Marcianus gr. 211, cognate to it: Moraux (1965) CLXXIX) the treatise (without the scholion) precedes Aristotle's *Metaphysics* under the title of Θεοφράστου τῶν μετὰ τὰ φυσικά.

[3] The critical contents of the treatise —which must have been as striking on the supposition that Aristotle was its author as when ascribed to Th., or to anyone else—leaves us with the question how it is possible that all ancient commentators apparently overlooked the treatise, or why they did not think it worth mentioning.

In order to explain Alexander's testimony that the authorship of the first book of Aristotle's *Metaphysics* was disputed, Jaeger concludes that Th.' treatise, *plus* scholion, "[stand] schon vor Alexander in der Aristotelesgesamtausgabe der Kaiserzeit unmittelbar vor der Metaphysik, und der Parisinus hat diesen Text mitsamt der Anordnung erhalten." (1932) 292, cp. Regenbogen 1389. (See, however, next note.) As was implied above, I do not know of any indication in Alexander's commentary testifying to his being acquainted with Th.' *Metaphysics*.

[4] In Parisinus gr. 1853 Th. *Met.* apparently follows Arist. *Met.*: see Burnikel (1974) XXVII; 119 with n. 16 (*contra* Jaeger (1932), preceding note).

[5] Cp. *ad* 6 a 10-2, pp. 244-6 below.

found it there. Consequently, if it *was* included in his ἔκδοσις of Aristotle's works, this does not necessarily imply that he thought Aristotle to be the author. Nicolaus, too, may have found it anywhere in the environment of Aristotle's *Metaphysics*[1] and may have identified Theophrastus as the author, which would merely imply that if he found the treatise in Andronicus' edition, it was not ascribed to Theophrastus there. How the scholiast came to be acquainted with a list of Theophrastus' works by Andronicus, as he apparently was, though, again apparently, not with Andronicus' edition of Aristotle's works,[2] seems a comparatively minor puzzle.

This conjectural situation would at least account for the fact that the treatise was transmitted at all; alternatively one might suppose, without calling in question the trustworthiness of the scholion, that it was found by Nicolaus somewhere else in the context of Aristotle's *Metaphysics*.[3] If Diogenes Laertius' list of Theophrastus' works goes back to a *pinax* by Hermippus,[4] the scholiast was right in saying that it does not include a *Metaphysics*. This, however, seems to be all that can be inferred from it.

As was said above, the content of the first sentence of the treatise may have helped to give rise to the title of *Metaphysics*. The question of the delimitation of τὰ πρῶτα with which the treatise begins places the whole discussion in what may be called an Academic-Peripatetic context.[5] It may indeed be claimed that in the first chapter Theophrastus penetrates to the core of this philosophical tradition. In this introductory chapter he presents as a likely candidate for being the first principle sought Aristotle's concept of an unmoved mover which imparts movement as an object of desire. This principle in its turn may be conceived as an answer to the question raised by the Platonic Ideas with their separate existence, sc. how the principles of nature may be the cause of the natural entities being as they are—i.e., entities endowed with movement—, while remaining themselves unaffected by the instability of these entities.

However, in the light of the closing section of the treatise the opening question (how and by what sort of characteristics one should delimit ἡ ὑπὲρ τῶν πρώτων θεωρία, 4 a 2-3) appears to have been a serious question indeed:

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1 Burnikel (1974) 125-7 thinks it likely that the title (orginally "Theophrasts Anteil an der Metaphysik des Aristoteles", 126) derives from Nicolaus himself.

2 As may be inferred from οὐδὲ γὰρ μνείαν ... πεποίηνται.

3 "Jedoch ist die Möglichkeit nicht auszuschliessen, dass die Schrift erst zwischen Andronikos und Nikolaos aufgetaucht ist.", Regenbogen 1390.

4 As is assumed, with some qualification, by Sollenberger (1984) 27-35.

5 "L'immobilité et l'immutabilité des principes définit en effet aussi bien la position d'Aristote que celle de l'Académie", L-M *ad* 4 a 6-9.

by the time we have reached the end of the treatise we find that the idea of a study of 'first things' has disappeared altogether, or rather merged into that of the cosmic whole (ἡ τοῦ σύμπαντος θεωρία).[1] This seems to imply that, as far as Theophrastus is concerned, metaphysics is not a science in its own right: knowledge of τὰ πρῶτα, in the sense of τὰ νοητά, is essentially connected with that of the other ingredients of the whole—just as these ingredients themselves are essentially interconnected.[2] The maximum sense that can be squeezed out of the title τῶν μετὰ τὰ φυσικά, then, seems to be that someone recognized that, while the text belongs with the metaphysical treatises, to call it by the name of *Metaphysics* would be not quite appropriate.

IV

In view of the character, sketched above, of this genre of scientific prose, which tends to be more explicit about questions than about possible answers to these questions, to assert that Theophrastus was critical of his predecessor to the point of rejecting some of his ideas and offering suggestions of his own to replace them, might seem to be going beyond the evidence of the text.

Still, as was argued above, inferences can be made from the answers, or the kind of answer, offered for consideration without being subsequently rejected, as well as from the options, or the kind of option, qualified as implausible—which often means that they are, or are considered to be, consistent or inconsistent (respectively) with other conceptions considered as plausible.

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[1] 12 a 1. See esp. IX.3, 11 b 12 ff. In this light there seems to be some irony in stating that, if the treatise were to be rebaptized, "il faudrait sans doute l'intituler περὶ ἀρχῶν", as L-M [12] do. In fact, in view of the emphasis on the interrelation between the parts of the cosmos (also in terms of τὸ αὐτόματον and ἀνάγκη) the title of Περὶ αἰτιῶν α′ in Diogenes' list (V.49, 137.9 FHS&G) would do better. Cp. Sollenberger (1984) 351.

[2] See 4 a 9-17, 4 b 2-4, cp. also 5 b 19 ff.; note also the expression τὰ πρῶτα τῆς φύσεως 10 a 6.

Cp. Reale (1976) 135: "Metafisica come ricerca delle cause *dell'universo in quanto universo*, ricerca dei limiti del medesimo, dei reciproci rapporti che, in esso, hanno le realtà, ricerca dei limiti del finalismo e della tendenza al meglio: ecco a che cosa effettivamente si riduce la 'filosofia prima' o meglio la 'scienza delle realtà supreme' di Teofrasto, quale essa risulta dallo scritto che ci è pervenuto. Dunque, Teofrasto è ben lungi dall'essere rimasto fedele ad Aristotele: sono le fondamenta stesse del discorso metafisico che nel suo scritto di filosofia prima risultano compromesse."

Rather more boldly Burnikel (1974) 126: "Theophrast [scheint] keine Lust gehabt zu haben, eine 'Metaphysik' zu schreiben: dem widerspricht die Skepsis, mit der er 6 a 3 theologische Erörterungen abbricht (ὑπερβατόν τι καὶ ἀζήτητον), und die Ironie, mit der er allzu diffizile Überlegungen abtut (8 b 9: ὑπερβατός τις σοφία)."

It is a somewhat discouraging consequence of this situation that a more than ordinary effort is required to distill from the wording of the text what it may teach us about the author's point of view. The reader needs to make himself familiar with the idiom current in the intellectual context of the Peripatos, including the connotations of its vocabulary. Because the amount of material offered in the commentary is in danger of overshadowing the general drift of the information which it yields, it may be helpful to summarize the drift of the argument.[1]

The following summary, then, which does not pretend to do justice to the detail of Theophrastus' argument, is framed so as to bring out the main thread of the discussion, even though this forces one to do violence to the circumspectness of Theophrastus' own phrasing. For a more neutral and more detailed analysis the reader is referred to the commentary.

Chapter I

4 a 2 How should one define the study of the first things? This requires a delimitation of it from the study of nature. That such a delimitation can be achieved is suggested by the contrasting characteristics ascribed to these studies and to their objects:[2] the things of nature are more varied, less orderly and subject to all kinds of change, the intelligible is characterized by order and stability. The study of the principles is in general more highly valued.

4 a 9 The first question to be answered regards the nature of the boundary to be drawn between the two fields of inquiry, i.e. whether there is some connection between them, and whether their making up together the totality of being is based on some interconnectedness or not. It is more plausible that there is such a connection, and that the objects of the intellect and the objects of sense relate as prior vs. posterior with regard to being and authority, like the relation between the heavenly bodies[3] and perishable things.

4 a 17 What kind of things, then, are the first principles? Mathematical objects in any case do not qualify, insofar as they do not seem to have independent existence; or if they have, they do not meet the requirement of a connection with the things of nature—or in any case they do not connect with the things of nature in such a way as to produce their various kinds of movement.

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[1] Cp. e.g. R-F xi-xviii, L-M 19-27.

[2] For the essential and far-reaching parallelism assumed between a science and its subject-matter, see e.g. *ad* μεταβολὰς ἔχουσα παντοίας 4 a 5, κατὰ ταὐτά 4 a 6; also 4 a 6-9, 6 b 16-7; 9 a 10-1; 10 a 5-9.

[3] τὰ ἀΐδια (4 a 16), as I take it; the relation between the objects of thought and the things of nature is characterized by a predominance of the former over the latter, to be elucidated by the (more obvious) influence of the heavenly bodies on the perishable constituents of nature.

4 b 6 Any candidate which would be better equipped for this task is likely to be numerically one. Its identity should presumably be defined by its being superior to everything else, as when we are trying to establish the nature of God—considering that the principle on which all things depend for their existence is itself divine. Further identification of the principle hereby characterized in relative terms is difficult.

4 b 18 The principle, showing a connection with nature, which is characteristically in movement, should obviously be conceived as its moving cause. As a moving cause is itself without movement,[1] it should impart movement on the strength of some capacity more powerful than this. The object of desire meets this requirement, and has the advantage of solving the problem of an infinite regress of causes imparting movement.

5 a 5 So far the account is consistent, in assuming that there is one principle characterized by activity and being,[2] and without ascribing divisibility or quantity to it, simply raising it to a more divine level; for we should take care to avoid the suggestion that a privation is involved, which is naturally inappropriate where a principle is concerned.

Chapter II

5 a 14 The idea of a desire[3] on the part of the things of nature requires further discussion, seeing that the movements of the heavenly bodies are far from uniform. What kind of desire is it, and for which objects? (*Rest* had better be dropped as a candidate, since it would involve a waste of effort on the part of the heavenly bodies, and is not in evidence anyhow.)

If it is a single principle, the diversity of movement is left unaccounted for; if there is a plurality of principles, the reality of an all-pervading desire for the best is not evident.

5 a 23 If the heavenly bodies are supposed to have a natural desire for the unmoved principle, why are they actually pursuing movement instead? On this view, the hypothesis of a final cause consisting in ἠρεμία appears to be redundant.[4] Why, then, should the theory of an imitation on the part of the natural entities involve an ultimate principle characterized by rest, viz. the One? (This regards the adherents of the One and those of numbers alike.)

5 a 28 The alleged desire for the best presupposes that the heavenly bodies are animate, which means that they have psychic movement (since desire in-

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[1] ἐπεὶ δ' ἀκίνητος καθ' αὑτήν (4 b 22) shows that the Academic-Peripatetic axiom is taken as point of departure. But see Ch. V, 7 b 13 ff.

[2] ἐνέργεια and οὐσία admit of a more technical interpretation, as 'actuality' and 'essence' respectively, as well.

[3] Or rather, a 'tendency' (ἔφεσις, 5 a 15): for Th.' option for this more physical term, instead of the more psychological term ὄρεξις used by Aristotle (to whose theory Th. is obviously referring here), see note *ad loc.*

[4] For the theory of an ὄρεξις it would suffice to say that the heavenly bodies, too, just desire their own particular good (sc. κυκλοφορία).

volves sense perception, which takes place in soul); and because a desire *for the best* is involved, they should in fact have dianoetic movement. The rotation imparted by the alleged first cause, then, would be inferior to the movement they already have.

5 b 10 The sublunary entities do not show the influence of the object of desire —which is puzzling where a supreme, omnipotent principle is concerned. The only alternative is that the fault lies with the sublunary entities, so that one might raise the question whether they are worthy to be part of the cosmos—and if so, in what way. For they are not only far removed from the principle, but their ἐνέργεια is inferior too. In fact, the change of place and the elementary interchange characteristic of the sublunary world occur only accidentally under the influence of the rotation of the heavenly bodies.

5 b 26 As in the case of the heavenly bodies, on the assumption that the best cause produces the best effect, the sublunary entities too ought to receive something better than rotation (which in their case is lacking). The expectation that the best is coextensive with all things, however, might seem to disregard the differentiation which is essential to the cosmos.

6 a 5 With regard to the first heaven itself, the theory of a desire for the best seems to make its rotation accidental. In order to guarantee its continuation, the rotation should be of its essence—unless the desire were innate in it (which is possible).[1]

The question might be raised whether the cosmos could exist without the rotation; but this question belongs elsewhere.

Chapter III

6 a 15 Whichever the principle (or principles) assumed, one might be expected to go on to give an account of the lower levels of being as well.

6 a 23 In practice, however, most philosophers fail to do so; for instance the adherents of the One and the indefinite dyad who, after having explained the more abstract phenomena,[2] fail to make mention of the heavens and the rest of nature. This also holds for Speusippus, who does not point out any causal or otherwise functional relations between the different constituent parts of nature either. Xenocrates, who does provide a complete explanation, paying equal attention to all provinces of being, constitutes a favourable exception; Hestiaeus, too, is at least aware that philosophical explanation should extend beyond the level of the principles.

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[1] Or, for which an analogue can be provided? Th. may have in mind the σύμφυτον πνεῦμα in animals postulated by Aristotle, analogous to the fifth body as the element of the heavenly bodies: see commentary *ad loc.*

[2] E.g. place, void, soul, time and, presumably, the outermost heaven (οὐρανόν 6 b 3)—that is, if one does try to make sense of the following (seemingly inconsistent) assertion to the effect that no further mention is made of the οὐρανός (τοῦ ... οὐρανοῦ 6 b 4). However, the latter occurrence might be interpreted as referring to the heavens (i.e. the lower regions which constitute the realm of meteorological phenomena) in particular. Alternatively, one might adopt the conjecture ἀνθρώπου (L-M *ad loc.*). See commentary *ad loc.* p. 263 below.

Seen in this perspective, Plato might seem to be doing quite well, insofar as he includes the physical entities in his account of being, both in the inductive and in the deductive part of his explanation. For some philosophers, however, being and truth consist in the principles.

6 b 17 The attention paid in philosophy to what comes after the principles contrasts with that in the other sciences; not surprisingly so, considering that philosophy is trying to find the principles, whereas the other sciences start from the principles (those underlying the object or product of the science in question).[1]

Chapter IV

6 b 23 One might ask whether the (elementary) principles[2] are endowed with shape or not. If the elements are veritable ἀρχαί, they are also the most valuable of things, which would make it proper that they should involve shape as well. Taking into account the situation in the other sciences and in the arts, too,[3] it is likely that a certain definiteness is involved. The fact that the things of nature[4] have shape offers an argument in favour of a certain definiteness for the elementary principles too.

7 a 6 With regard to the choice between shaped and unshaped elementary principles, three positions may be distinguished in the doxography: some people assume only shaped elementary principles, others only material ones; a third group assumes both shaped and unshaped principles.[5] Considering the order in the cosmos and its constituents, it seems unlikely that there would be no definiteness whatsoever in the principles (although this is what physiologists who assume a single material principle hold).[6]

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[1] Natural entities, too, apparently being conceived as 'products' (sc. of nature). The idea seems to be that, in view of the traditional separation of metaphysics from natural science, the fact that philosophers tend to neglect what comes after the principles is not surprising.

[2] Here ἀρχαί refers to τὰ ἐνυπάρχοντα αἴτια, the elementary or material principles, as contrasted with the noetic, unmoved 'first principles' which were at issue in the discussion so far. Compare the different applications of αἱ ἀρχαί in 6 b 21 and in 6 b 22. Cp. 144 B.6-7 FHS&G τὸ μέντοι τῶν φυσικῶν ἀρχὰς εἶναι δῆλον ἐκ τοῦ τὰ μὲν φυσικὰ σώματα εἶναι σύνθετα, πᾶν δὲ σύνθετον ἀρχὰς ἔχειν τὰ ἐξ ὧν σύγκειται· ...

The present treatment of the elementary principles under the common denominator of ἀρχαί (which as such could apply to non-elementary, immaterial, unmoved first principles as well) calls attention to the status and value of the elementary principles as such. Cp. also 11 b 21-3.

[3] Insofar as letters, notes, metric elements, syllables, points, lines, or primary numbers are definite.

[4] Apparently the referent of τὰ μετὰ τὰς ἀρχάς 7 a 3-4.

[5] 7 a 7-8 τάς ... ἐμμόρφους: "enformed principles", i.e., presumably: particular cases of form qualifying matter; τὰς τῆς ὕλης: "principles of form", i.e., presumably, matter viewed as a substrate to particular cases of form. Th. seems to be formulating the Aristotelian position in terms maximally comparable to the theoretical distinction between elements endowed with shape and non-shaped elements as laid down in 6 b 23 ff.

[6] Heraclitus is presumably adduced as a favourable exception: see commentary *ad loc.*

7 a 19 The third, most plausible, conception of principles, which holds that they involve both matter and form, cannot explain the variety of form observed in sublunary nature, as long as the determinateness of these entities is supposed to be due to a final cause. A solution would be to ascribe this diversity to the influence of the heavenly bodies.[1]

7 b 5 These questions need further discussion in the broader context of the question why, in the cosmos as a whole, the amount of order is necessarily limited.

Chapter V

7 b 9 'Rest', however, might be ascribed to the first principles[2] only if this involves a better condition; it should not be ascribed to them if it involves a privation of activity (i.e., a lack of activity where this might have been present). Rest (ἠρεμία) however might be replaced by activity (ἐνέργεια), i.e. a superior kind of movement.[3] For the axiom that there must be a first mover which is not in movement itself seems to be questionable: observation confirms that mover and moved may coincide. The instances of mind and God are a case in point.[4]

7 b 23 If, as we have argued,[5] the heavenly bodies do not actually imitate the rest of the first principle, there is no guarantee that the lower levels of being imitate the rotation of the heavenly bodies either—so that the cyclical return of natural phenomena too is at risk. A solution would be not to reduce things to a principle without parts, but to conceive of the cosmos as a differentiated organic whole, with a maximum of harmony and in itself complete.

Chapter VI

8 a 8 To return to the question of the elementary principles:[6] should matter be conceived as non-being, i.e., potential being,[7] or rather as indeterminate being as in the case of the crafts? It seems to be more likely that being ap-

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[1] Cp. Arist. *Met.* 1072 a 15-7 οὐκοῦν βέλτιον τὸ πρῶτον· καὶ γὰρ αἴτιον ἦν ἐκεῖνο τοῦ ἀεὶ ὡσαύτως· τοῦ δ' ἄλλως ἕτερον, τοῦ δ' ἀεὶ ἄλλως ἄμφω δηλονότι.

[2] Th. now returns to the subject of the *first*, unmoved principles, with which the treatise began (ὅθεν δὴ καὶ ὁ πρῶτος λόγος, 7 b 9-10).

[3] Only if conceived as ἐντελέχεια, Aristotle would agree. If conceived as some kind of κίνησις, its application to the first principle, I think, would have been objectionable to Aristotle.

[4] In the case of mind and God, too, some kind of κίνησις is apparently involved, and some kind of agent-patient relation obtains, which however does not involve a disqualification, and which does not detract from its eternal existence.

[5] Chapter II, 5 a 23-5.

[6] See Chapter IV.

[7] The identification (or, at least, association) of τὸ δυνάμει ὄν with not-being may be regarded as a not very congenial introduction of the Aristotelian conception, which implies 'not being this particular thing' rather.

plies already at the level of matter; this 'being' is without any specification, but it does involve some capacity.[1]

In any case the status of matter should be grasped by an analogy with the crafts or by another comparison.[2]

Chapter VII

8 a 21 The question *why* the cosmos consists of contraries, and why the worse has a share in it which equals that of the better—or, depending on what one regards as 'worse', why the great majority of things is 'worse'—is an instance of asking for a reason where there is none. Those who complain about the amount of evil in the cosmos fail to recognize that all things in fact *are* good, viz. insofar as being may be predicated of them.[3]

8 b 4 That the contraries are essential to being,[4] so that being, which is good, depends for its existence on evil, is even more paradoxical. To apply contrariety to being itself[5] is pushing the paradox too far.

Chapter VIII

8 b 10 The process of acquiring knowledge testifies to the importance of differences in being: sense perception observes differences and looks for the causes involved; or rather, in less complicated cases, sense perception offers to the thinking faculty plausible suggestions with regard to the cause involved, in other cases it produces an ἀπορία, in which cases knowledge can be reached, with some effort, by an intuition of διάνοια. This paramount role of differences holds both between particulars and between universals (either species or genera).

8 b 20 Practically every science[6] is concerned with what is peculiar to the object at issue. Generally the task of a science is to distinguish what is the same in a plurality of things, whether on a higher or lower level of generalization. This 'same' differs with the objects of investigation. Complete science makes use both of what is the same universally and of what is the

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[1] δύναμιν δέ τιν' ἔχον (8 a 19), to be interpreted either as the capacity to be formed (like raw material in the case of the crafts), or as the power of heat, cold, etc. (and presumably the active power of heat in particular).

[2] Such as, presumably, a comparison with semen, or with the matter which supposedly is the female contribution to the generation of animals.

[3] This at least seems to be the implication of the contrast implied between the contraries good/evil and contraries like white/black: good/evil relate to being in some sort of paradoxical way, divergent from the way in which, e.g., white/black relate to colour, since being is good as such. Cp. 11 a 25-6.

[4] Cp. 11 b 11-2.

[5] The reference is either to a purely theoretical and (as it were) thought-destroying way of reasoning, which applies the axiom that there is a contrary of everything to the totality of being as such, or to imaginary creatures like centaurs.

[6] The allowance made by σχεδόν might concern knowledge of the elements or δυνάμεις.

same at the level of particular things. In the case of the intelligible objects, the end is universal; where the things of nature are concerned, it is the individual (as is the case with things made and things done, where it is more obvious that the particular product or action is aimed at).

There are several kinds of sameness through which we may know something; not only the wider varieties connected with classification, but also sameness of quality, place, time, and the other categories. Analogical sameness is most fertile since it produces knowledge of what is beyond immediate acquaintance.

9 a 10 Since knowing applies in various ways, our point of departure should be the method peculiar to each kind of object. For there is a peculiar method for each kind of object (e.g. objects of thought, natural objects); and *within* these kinds too a division applies (e.g. heavenly bodies, sublunary entities and among the latter animals, plants, inanimate things).[1] Only in the case of mathematics the division is clear-cut.

If a peculiar method can be identified in the case of the principles too, a division should be made here, too.[2] The method involved might be described as knowledge by analogy—i.e., by their being known by the unknowable[3] (sc. mind). Compare the (more obvious) capacity of seeing things by means of the faculty of vision which cannot be seen itself.

9 a 23 We should try, then, to make a complete inventory of kinds of objects to which a peculiar method may be assigned, which would provide us with the sum total of applications of 'knowing'. The definition of 'knowing', however, (which is required for answering these questions) is difficult, considering that where the use of a term is essentially connected with its particular reference in each case, no common characterization can be found.

9 b 1 Since there is no delimitation of knowledge independently from a delimitation of being, it is also difficult to say how far we should go on in our quest for causes, in the case of the objects of sense and of thought alike. That there *is* a limit is inherent in the nature of these objects themselves, as well as being a necessary condition for our understanding.

9 b 6 Although there is no clarity about the end of our search for causes, the objects of sense and the objects of thought do provide a starting-point (or, for practical purposes the objects of sense at least do so). In our quest for causes we are unable to proceed to the first things—either because there is no cause, or because of a deficiency on our part (in which case there could be one more cause at least).

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[1] Cp. the difficulty on what level of aggregation one should stop searching for causes, 9 a 26 - b 1; 9 b 16-21.

[2] Presumably, a division between the method of knowing the elementary, and that of knowing the first principles.

[3] This rather obscure formula is apparently suggested by the less tenable view that the principles are known by being unknowable themselves.

But perhaps it is more in accordance with reality to say that we grasp the extreme constituents of reality by means of the intellect itself (so that, while they may be unknown, once they *are* known there is no deception about them).

9 b 16 Although the question where to stop searching for an explanation, apart from its general importance, is crucial for our knowledge of a particular object (and for the most important ones especially), there is something in the intellectual attitude of the investigator which hinders him from accepting any explanation as ultimate, whether his field of study concerns nature or entities even prior to this.[1] Still, it is essential that he should do so, since people who try to explain everything destroy explanation and knowledge—or rather: one *should* try to explain 'all things' in the sense of each and every part of the cosmos, but one should *not* try to provide an explanation even of the limits of being and knowledge.

9 b 24 People who stop their inquiries after having explained the first and most valuable among the physical entities (sc. the heavenly bodies) do not extend their account of the cosmos far enough; they should specify the principles and the relation between the parts of the universe as well, and after that go on to explain the lower levels of nature, too. As the practice of astronomy shows, the explanation of the cosmos extends beyond the domain of physics.

10 a 9 And yet, taking into account that movement is essential to the cosmos as such, it seems that the cosmic whole is of a 'physical' nature itself (so that the same would hold for the method of investigation). Analogy with an animal in any case suggests that the ultimate explanation of the movement of the cosmos would amount to merely recognizing the nature of the cosmos to be an entity with movement as its essence.

10 a 19 The problem that, whereas (a) the study of the whole apparently is not entirely physical, (b) the cosmos as a whole, being in movement in accordance with its essence, does not accommodate non-physical entities, is somehow connected with the problem of the unmoved mover.[2]

Chapter IX

10 a 22 It is not easy to determine how far one should go in maintaining that an entity is such and such for some reason.[3] This difficulty concerns not only

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[1] The phrasing of περὶ τὰς τῆς φύσεως καὶ περὶ τὰς ἔτι προτέρας (sc. πραγματείας) seems to testify to a scepticism with regard to a clear-cut borderline between physics and metaphysics to be observed elsewhere in this treatise: see esp. I.2, 4 a 9-17 (τὰ μὲν πρότερα τὰ δ' ὕστερα, 4 a 15); IX.4, 11 b 24 – 12 a 2; cp. also III.3, 6 b 17-22.

[2] Presumably insofar as there, too, it is problematical in what sense there can be a cause transcending the whole, unaffected by movement itself (see 7 b 15 ff.); the present problem (what is the subject-matter of metaphysics, considering that the universe as a whole is of a physical nature?) involves the same paradox, and in fact may seem to be the epistemological counterpart of the problem of the unmoved mover.

[3] The summary by WEHRLI (1983) 480 "Mit der teleologischen Frage hat alle Forschung zu beginnen" seems to be somewhat confusing.

the beginning and the end of the chain of teleological causation *per se*, but also the fact that some entities apparently resist teleological explanation.[1] Some phenomena seem to be as they are by coincidence or by some necessity, both in the celestial and in the sublunary region (where this actually holds for the majority of things).

10 a 28 For instance in the field of meteorology, in the case of fluctuations and sudden changes it is obscure what these are for; in fact such phenomena fit in badly with a kind of explanation according to which one might expect things to develop uniformly in one direction.[2] A further problem are phenomena with regard to animals which do not seem to serve a purpose, which are harmful to the animal in question, or even against its nature.

The most significant example is offered by the various phenomena connected with nutrition and generation of animals; the very diversity to be observed suggests that these phenomena are not for the sake of nutrition and generation (or for anything else); rather they are somehow connected with the movements of the heavenly bodies, or they develop under the influence of external conditions generally.

10 b 20 A further example in which the question 'for the sake of what' might be asked concerns the lower levels of being, those of vegetative and inorganic nature; the question applies particularly strongly in the case of the latter. It is hard to believe that the variety to be observed in plants and inanimate things, with their apparently determinate nature, has no explanation, especially if this is not in like manner assumed for the more complex entities higher up in the hierarchy of being.[3]

It has some plausibility, then, that differences between plants & inanimate things arise spontaneously and as a consequence of the meteorological conditions connected with the rotation of the cosmos.

11 a 1 Even if an explanation in terms of spontaneity does not hold water, bounds should be set to teleological explanation anyway, for the kind of explanation which combines the belief that everything in nature is heading towards the best, conceived as eternity and order, with a *ceteris paribus*-formula to account for the defective realization of this tendency is not convincing either. This principle inspires doubt, both as a general statement and as applied to particular instances, and in the latter case it gives occasion to some special pleading.

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[1] Since Th. is exploring here the limits of teleological causation as such, as he did with regard to the limits of knowledge and being in the preceding chapter, it is not surprising that (a) some of the examples discussed are the same as those recognized as resisting explanation in terms of final causation by Aristotle, while at the same time (b) Th. is calling in question here the possibility of explaining teleologically phenomena to which Aristotle *did* ascribe a function or purpose.

[2] The present argument concerns a discussion of the merits of an "over-all teleology" (*πάνθ'* ἕνεκά του καὶ *μηδὲν* μάτην, 10 a 22-3). The Aristotelian variety will be discussed in IX.2, 11 a 1 ff.

[3] This in any case seems to be the purport of this (also textcritically) complicated sentence. I take it that προτέροις καὶ τιμιωτέροις (10 b 25-6) refers to animals.

The statement that everything in nature strives after eternity, which is realized where this is possible, is likewise questionable. For even if the desire belongs to the nature of these entities, it is evident that the majority of things are irresponsive to its call and do not receive the alleged good: only a small part of nature is endowed with soul in any case, and even in the case of animate things, their being, i.e. the portion of eternity allotted to them, is minimal.[1]

11 a 18 The impression which may arise from what precedes, that the good is only a minor part of nature, is valid only on the assumption that the good consists in eternity and order. In general, outside the conception of teleology referred to in the preceding, the claim that the good is something rare and comprises few things, whereas 'the bad', evil (τὸ κακόν) abounds, is stupid. To say that evil is predominant is justified only when evil is identified with matter.

Philosophers who maintain such a point of view cannot be advanced as authorities to support this thesis: they themselves speak without giving due weight to the facts of observation.

Both disorder and order, both inanimate and animate, both matter and form, then, are integral parts of the cosmos, and as such are good.

11 a 27 The teleological conceptions of Plato and the Pythagoreans in a way meet the requirement of a delimitation of the tendency towards the best. Although, with a view to the imitation assumed, they postulate a distance between the good and other entities (for whose existence the One and the indefinite dyad, respectively, are held responsible), to these philosophers the cosmos as a whole essentially depends on the presence of the one as well as of the other: contrariety exists on the level of the principles themselves. Accordingly, even God is not considered to be capable of leading everything towards what is best.—In fact, even if he could, it is unlikely that he would choose to do so, given that reducing the share of evil would eventually destroy the totality of being, which essentially consists in contraries.

11 b 12 Even in the elementary principles many things on closer observation appear to be at random, as is illustrated by the elementary changes connected with the changes of the earth, which are neither 'better' nor 'that which is for the sake of something'; if they are anything short of being random, it would appear that they follow some necessity. That the first bodies are subject to chance processes may be also inferred from phenomena in the air and in other regions of the cosmos.

What entities, then, show the highest degree of *order*? (The question whether what shows the highest degree of order may justly be called the best is disregarded here.)[2] Among the objects of sense, the heavenly bodies

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[1] Cp. Arist. *Met.* 1072 b 13-5 ἐκ τοιαύτης ἄρα ἀρχῆς ἤρτηται ὁ οὐρανὸς καὶ ἡ φύσις. διαγωγὴ δ' ἐστὶν οἵα ἡ ἀρίστη μικρὸν χρόνον ἡμῖν.

[2] τήν *γε* τάξιν 11 b 18.

might seem to qualify as such, sc. in view of their rotation (which on the other hand does not show much uniformity either).

Among the non-sensible objects the mathematical objects might seem to show the highest degree of order, as being without motion and change; unless, assuming that it is order that we are searching for, entities could be found which are better qualified to serve as first principles; and unless one were to assume that the shapes of the elementary principles are indivisible.

11 b 24 The amount of order actually found in different parts of the cosmos requires further discussion. In any case, we must try to grasp the limit which applies, both in nature and in the being of the whole, to explanation of phenomena as being for the sake of some end and due to an impulse towards the better. For the study of the whole starts from this: to determine the constituent parts of reality[1] and the relations between them.[2]

V

Finally I will try to offer, on the basis of the preceding summary, an assessment of the text involving an attempt at a coherent interpretation of the treatise as a whole, accommodating and doing justice to as many parts of the argument as possible.

Existing interpretations of Theophrastus' treatise tend to focus on (a) the question of its relation to conceptions of his more famous colleagues, and (b) its date in relation to Aristotle's writings in particular; moreover (c) Theophrastus himself is not infrequently judged by the standards according to which his predecessor excels.

Ad (a). "Rather than attacking teleology, Theophrastus delivers in the *Metaphysics* a lively, astute defense of it against what he sees as ill-considered attacks from various members of the Academy.", Vallance (1988) 31; "Il nous semble plutôt que Théophraste, porté par un intérêt tout aristotélicien à l'égard de la diversité des manifestations naturelles, s'est demandé quelle théorie des principes pourrait leur assurer le meilleur fondement. Le paradoxe, qui fait à nos yeux l'un des grands intérêts de l'opuscule, est qu'il devait la trouver dans l'Académie platonicienne.", L-M [21].

Ad (b). The treatise has been given an **early date** by Frede "[mir scheint,] dass Theophrasts Kritik Aufschluss über die Diskussionen gibt, die Aristoteles veranlasst haben, seine Lehre vom unbewegten Beweger zu ändern." (1971) 79; Devereux "after Aristotle had finished Lambda but before he had developed the rich and complex doctrines of the central books of the *Metaphysics*", (1988) 182;

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[1] Presumably not only the identification of the first principles, but also the identification of the entities and 'classes' of entities which ask for explanation.

[2] The question how the parts make up the whole (cp. 4 a 10 ff.), presumably including the causal relations between natural entities (and the influence of the heavenly bodies in particular).

DEVEREUX recognizes that "If Theophrastus formulated his criticisms of key doctrines in Lambda as early as we have suggested, it is odd that Aristotle seems to take no account of them in his later works." (184). "In regard to the objections to the doctrine of unmoved movers, it is possible that Aristotle simply saw no way of defending his doctrine, and was not sure how to deal with the question of the motion of the heavenly bodies." (188 n. 66). BALME (1962) 104: **after Aristotle's *Met.*** but before *GA* and *HA* V-VI; MOST (before *PA* and *GA*): "This might well mean that the difficulties raised by Theophrastus were designed not to block a line of reasoning (that is, Aristotelian teleology), but instead to encourage research by pointing toward problems that required explanation. If so, then the explanations provided by Aristotle in *PA* and *GA*, so far from being the object of Theophrastus' criticisms, were instead answers Aristotle provided to the kinds of questions Theophrastus raised." (1988) 233; cp. also L-M [14-5], where the possibility of an earlier date is taken in consideration, too; "noch zu Lebzeiten des Aristoteles, am ehesten während seines zweiten Athen-Aufenthalts (335-323)", GAISER (1985) 55. **First generation after Aristotle** ('communis opinio': see GAISER (1985) 54 with n. 47): R-F xxv, REGENBOGEN 1393; TRICOT VIII; THEILER (1958) 102; REALE 131; cp. VAN RAALTE (1988) 198-203: somewhere between 323 and 320 B.C.; see also below.

Ad (c). "Theophrastus, whose logical sense is weaker than Aristotle's, can hardly be expected to succeed in this respect, in which his master conspicuously failed" R-F xx; "There is no evidence that Theophrastus ever wrote a substantive work on metaphysics, nor does the present essay suggest that a metaphysical treatise by him, had he written one, would have been a very valuable work." *ibid.* xxiv; "Plato is a philosopher pure and simple; Aristotle is a man whose interest gradually turns from philosophical speculation to the study of detailed problems of natural science and history; Theophrastus is first and foremost a man of science. He has enough interest in metaphysics to ask intelligent questions, but there is nothing to suggest that he had either the interest or the ability that were needed to lead him to successful answers to his questions." *ibid.* xxv. "Lo scienziato Teofrasto monstra in modo inequivoco di non saper più intendere adeguatamente il messaggio filosofico del maestro; anche se, come scienzato, per esempio nella botanica, sta senz'altro sul piano del maestro." REALE (1976) 143. Also GOTTHELF (1988) 127-8 "Our investigation of *HP* confirms ... two remarks made (if our ancient source is correct) some twenty-two hundred years apart. In his magisterial *Die Philosophie der Griechen*, Eduard Zeller wrote that 'In creative power of intellect [Theophrastus] is not indeed to be compared with Aristotle. ... The fundamental principles of the system suffer no changes and are not infrequently stated in the very words of Aristotle.' And what did Aristotle himself think of this? Diogenes Laertius tells us that 'It is said that Aristotle applied to him and Callisthenes what Plato had said of Xenocrates and himself ... namely that the one needed a bridle and the other a goad; for Theophrastus interpreted all his thought with preeminent cleverness.' If Aristotle had hoped for more, as we might have, his characteristic generosity did not permit him to say so, at least not for posterity."

Anticipating a little on the following analysis of Th.' argument, I want to maintain that the likelihood Th.' treatise being posterior to Aristotle's works is supported by a combination of considerations: (1) Th.' treatise, as is generally recognized, has obvious relations both to the *Metaphysics* of Aristotle and to his biological treatises; (2) there is no indication that Aristotle ever reacted to Th.' suggestion that there is no need to assume a moving cause which is unmoved itself (and no need to postulate at the highest level of being something active which is not acted upon), or to his questioning the primacy of form and order as such; (3) Th.' treatise seems to conflate the notions of αἰθήρ and σύμφυτον πνεῦμα in the idea of the δύναμις of τὸ θερμόν to be found both at the highest and at the lowest level of being, the diversity of phenomena being caused by the various ways these entities interact; (4) whereas Aristotle's conceptions in *De Caelo*, in the *Metaphysics* (as well as in its various parts), and in biological works like *MA* and *GA* show obvious inconsistencies which are likely to reflect a development of thought, or at least a tendency to adapt his views to different contexts, Th.' treatise seems to be based on one central idea which may be seen as an attempt to provide a unified solution to the problem of causation in the different provinces of being; (5) the treatise testifies to an inclination to think over from the start the question of the principles, starting from an Academic-Peripatetic background. This general character and the specific purport of the treatise may be accounted for by the supposition that Th., who was interested in the peculiar no less than in what is common to different things, and thus not inclined to view variety as lack of order, was forced to formulate his views on the ultimate constituents of being on his taking over the leadership of the school.
This hypothesis at any rate explains that, while the argument obviously is connected with discussions in the Academy and the Peripatos, it is difficult to pin down Th.' views to either 'Platonic' or 'Aristotelian' conceptions.

Both the tendency to assign to the treatise an early date and the depreciation of Th.' intellectual capacities seem to give evidence of the prejudice that a more sophisticated explanation should be posterior to, and is better than, a simple one.

I submit that Theophrastus' *Metaphysics* betrays a certain preoccupation, in his views on being and knowing alike, with the concept of a whole, its parts, and the way they relate to one another. This statement, in view of the beginning and the end of the treatise, is not particularly startling. It may be argued that an interest in the constituent parts of being and their interrelations is not surprising in an intellectual context where the classification of entities and the search for causes was common practice. I do think, however, that the focal point highlighted here may help us to elucidate some characteristics of the *Metaphysics*, and perhaps also of Theophrastus' work in general.

In Chapter III of the *Metaphysics*[1] Theophrastus expresses his conviction that, having identified the first principles, one is obliged to go on to explain

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[1] 6 a 15 ff.; see also 9 b 24 – 10 a 5. Cp. 9 a 12-5, (in the context of 'proper methods').

the lower levels of being as well. This passage immediately follows the introductory chapter where, starting from the stipulation that there should be some connection between the noetic and the natural entities, the maximum is made of the Aristotelian conception of the principle of movement as 'the object of desire', and the criticism of this conception in the next chapter. Thus, right at the beginning of the treatise, the question of the identity of the first principles makes room for a more comprehensive issue: irrespective of the first principles he may adopt, the philosopher should go on to account for other entities, including the things of nature.

There is not the slightest suggestion that giving an account of inanimate entities or plants is beneath the dignity of those who have found the most important entities. On the contrary, a renowned philosopher like Speusippus is criticized precisely for having failed to pay attention to the lower levels of nature, and Xenocrates and Plato are praised for doing better. For Theophrastus, then, the interest in these lower levels apparently is not merely a matter of predilection, but a requirement for whoever undertakes to find the principles of being.[1] *All* entities, whether principles, heavenly bodies, animals, plants, or inanimate objects, are part of the cosmos and thus worth studying. At the end of the treatise ἡ τοῦ σύμπαντος θεωρία has taken the place of ἡ τῶν πρώτων θεωρία at the beginning.[2]

In the beginning of *HP* when Theophrastus discusses the dilemma whether flowers, leaves, fruits, shoots, with their limited existence, should be supposed to be parts of a plant or not, he answers in the affirmative, apparently because of their contribution to the perfection of the organism.[3] Ac-

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[1] Cp. the fact that the qualifications σεμνοτέραν καὶ μείζω in 4 a 8-9 refer to the opinion of others.

[2] 12 a 1; 4 a 5, cp. 4 a 2-3. Cp. also III.3, 6 b 17-22, where the regrettable lack of interest on the part of the philosophers is accounted for by the different place occupied by the ἀρχαί in metaphysics (or, first philosophy) and in the other studies (including physics).

[3] See the formulation of the dilemma: εἰ μέν τις ταῦτα θήσει μέρη, τό τε πλῆθος ἀόριστον ἔσται καὶ οὐδέποτε τὸ αὐτὸ τῶν μορίων· εἰ δ' αὖ μὴ μέρη, συμβήσεται, δι' ὧν τέλεια γίνεται καὶ φαίνεται, ταῦτα μὴ εἶναι μέρη. βλαστάνοντα γὰρ καὶ θάλλοντα καὶ καρπὸν ἔχοντα πάντα καλλίω καὶ τελειότερα καὶ δοκεῖ καὶ ἔστιν. *HP* I.1.2. (Note the unprejudiced, observational motives to qualify plants as more complete when having these parts: καὶ φαίνεται, made explicit in the following).

Cp. also *CP* V.5.3-4 where Th. is discussing the phenomenon of two kind of trees coalescing, whether bound together for agricultural purposes or naturally; (...) γίνεται τὸ μὲν δένδρον ἓν τῇ συμφύσει, διατηρεῖ δ' ἕκαστον τὸ γένος, ἕλκον κατ' αὐτὸ καὶ πέττον τὴν τροφήν, οὐδὲν δὲ ἄλλο ἢ τῆς συμφύσεως κοινωνοῦν. ... (4) καὶ τούτων τὰ μὲν ἐξεπίτηδες ποιοῦσιν, ἔνια δὲ καὶ αὐτομάτως λαμβάνει τοιαύτην σύμφυσιν, ὅσα προσφιλῆ τε καὶ μὴ ἐναντία ἀλλήλοις· ὅταν γὰρ ἅπαξ συμπλακῇ καὶ δέξηται, καθάπερ φύσις τις αὕτη μία γίνεται, διὸ κἂν ἀφαιρῇ κἂν λύῃ τις αὐαίνονται, καθάπερ καὶ τῶν μὴ ὁμογενῶν τὰ ὁμοβλαστῆ καὶ σύντροφα γενομένα ἀλλήλοις. For the social connotations of the terminology cp. 4 a 9-13 with commentary *ad loc.*

cordingly, it should be accepted that in the case of plants the number of parts is indeterminate and not constant. In this they differ from animals, thus exemplifying the general rule that we should not expect to find a complete correspondence between animals and plants,[1] which by itself testifies to an unwillingness to incorporate everything in a unified system.[2]

The way in which leaves, for instance, should, in spite of their limited existence, be conceived as genuine parts of a plant—and this not accidentally, or testifying to the decay of the organism, but as a natural process yearly occurring to the plant in full strength—, may illustrate how according to Theophrastus the study of physical entities, perishable as they are, forms an integral part of the task of a philosopher: these entities, too, are natural and must be recognized as integral parts of being.[3]

Similarly, the attention paid by Theophrastus to the unusual and intractable, which is one of the more striking characteristics of his works,[4] seems to reveal his interest in differences as such. All knowledge depends on the observation of differences, since knowledge is knowledge of things peculiar to the object involved (τὰ ἴδια), whether this concerns particular entities, or universals—again regardless of the level of aggregation involved.[5]

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[1] *HP* I.1.1-5; especially 4: ὅσα γὰρ μὴ οἷόν τε ἀφομοιοῦν περίεργον τὸ γλίχεσθαι πάντως, ἵνα μὴ καὶ τὴν οἰκείαν ἀποβάλλωμεν θεωρίαν.

[2] "Encore plus vigoreusement qu'Aristote, Théophraste condamne la méthode spéculative et l'esprit de système appliqués aux sciences naturelles. Son principe, admis sans réserve par la science moderne, est d'étudier chaque espèce dans son milieu", Amigues (1988) I.XIV.

[3] Such in contrast to the valuation of these entities implied by the theory of an unmoved cause imparting movement by being the object of desire: see 5 b 19-26 (οἷον ἀπεωσμένα τῶν ἐντιμοτάτων, 21-2).

[4] See esp. Vallance (1988) 32 ff. "What difference there is between Theophrastus and Aristotle seems to lie in this area, and it presents itself in the form of a growing willingness to admit to the variety of nature even at levels that do not submit to general explanation." (36).

[5] 8 b 10-2; 8 b 17-20; 8 b 20-24. Even alleged peculiarities are worth reporting: e.g. *HP* VII.3.3 ἴδιον δὲ καὶ ὃ λέγουσι κατὰ τούτου (sc. τοῦ κυμίνου)· φασὶ γὰρ δεῖν καταρᾶσθαί τε καὶ βλασφημεῖν σπείροντας, εἰ μέλλει καλὸν ἔσεσθαι καὶ πολύ.

A reduced interest in classification by genera and species is reflected also by Th.' use of terms such as ὅμοιον and ἀνάλογον ("nicht terminologisch verwendet" Wöhrle (1985) 118 n. 296).

I must admit that I do not see that Th.' aim, whether immediate or ultimate, would be to group things in μέγιστα γένη, as Gotthelf assumes: "I think what our discussion shows is that the aims of the *Historia plantarum* are the same as those of the *Historia Animalium*, in both the short term and the long; that the immediate aim is the laying out of all the differences that are to be found among the kind of thing under study, that this is to be done systematically, by major categories of difference, and by successive subdivisions within each of those categories; that the more ultimate aim is the discovery of causes, and perhaps *the* ultimate one is best expressed as the achievement of understanding; that these more ultimate aims involve, in some way that is not really clear, the development of definitions of essential nature; and that

A watchful eye for everything is what may be expected from any adult, so that this is naturally required of a scientist too.[1] While the observation of differences is the beginning of all knowledge, knowledge of a particular subject—including the traditional sciences—depends on distinguishing what is 'the same' in a plurality of entities; the degree, as well as the way in which the entities in question are the same differs according to the investigation and the subject-matter at issue.[2]

Given this unprejudiced attitude with regard to the scope of investigation, the idea that to every subject-matter there applies a proper method raises a problem: since knowing applies in as many ways as there are fields of interest, a complete summing up of the ways in which 'knowing' is used at any level of aggregation would seem to be difficult.[3]

At the same time the tendency to take interest in all questions one meets, makes the question how far one should go on asking for explanations urgent. Although one may be theoretically convinced of the necessity of stopping somewhere in order to avoid an infinite regress, at each stage of the investigation it is difficult to be sure that one has reached the point at which to stop. Both the awareness of the necessity of stopping somewhere, and the psychological difficulty of accepting that one should stop here, are increased by the fact that the one and only reason why one should stop is that there *is* no further explanation.[4]

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the arrival at what Lennox and I have called 'widest-class generalizations' plays an essential role in the transition from the laying out of differences to the discovery, and laying out, of causes." (1988) 127. Where causation is supposed to depend on a combination of different factors, surely this kind of generalization is not the most obvious thing to be looking for. Cp. e.g. *CP* IV.1.3 διὸ καὶ οὐ πάντα βλαστάνει κατὰ τὴν αὐτὴν αἰτίαν, ἀλλ' ὅταν ἡ αἰτία τοῦ ἀέρος κατάσχῃ κρᾶσις quoted p. 29 n. 5 below; IV.11.6 ἐκ δυοῖν γὰρ ἢ καὶ πλειόνων ὅταν γένηταί τι δύναμιν ἐχόντων, ἀνάγκη κατὰ τὰς τούτων διαφορὰς καὶ τὸ ὅλον διαφέρειν (ὃ καὶ ἐπὶ τῶν ζῴων συμβαίνει· καὶ γὰρ καὶ τῷ ἄρρενι καὶ τῷ θήλει, καὶ τῇ χώρᾳ καὶ τῷ ἀέρι καὶ ὅλως ταῖς τροφαῖς, λαμβάνουσιν διαφοράς)· ὅθεν καὶ γενῶν ἰδιότητες γίνονται, ... See also 5 b 23-6, 7 a 22 – b 5, 10 b 26 – 11 a 1.

Gotthelf's judgement of Th.' capacities, therefore, does not seem to be too well-founded: "I think it is also the case that Aristotle was farther along in *his Historia*—at least so far as the *parts* of their respective organisms were concerned—than Theophrastus was in his, in that *HA* has much more in the way of these widest-class generalizations that both thought necessary to the establishment of causes than does *HP*." (*ibid.*); cp. also p. 24 above.

[1] 6 a 15-22.

[2] 8 b 20 – 9 a 6. That Th. himself combined a watchful eye with a sensitive ear is most strikingly illustrated by the *Characters*—which make one feel that the author must have been good company for 'seeing the cities of many peoples and learning their ways'. This most famous, and at first sight somewhat curious work by a serious scientist such as Theophrastus certainly was, offers a fine example of how the particular combination of observer and subject-matter determines the level of generalization.

[3] 9 a 23 – b 1.

[4] 9 b 16 (χαλεπὴ ... ἡ σύνεσις καὶ ἡ πίστις)-24.

In a way, then, the problem of identifying the ultimate principles is part of the more general question which entities, particular entities as well as classes (in the most comprehensive sense of the word), admit of explanation.[1]

In the case of the principle of movement this is most obvious: Theophrastus suspects that the postulate of an unmoved mover is simply a verbal solution, because in fact there may be no further explanation, the universe simply being essentially in movement (just as an animal is alive—as long as it endures).[2] This, in fact, is what remains of 'first philosophy' in Theophrastus' *Metaphysics*: the miracle of life,[3] lodged in soul (whose relation to the body is problematic in itself,[4] and which cannot be further accounted for), but now on the level of the universe as a whole, the rotation of which may be conceived as a kind of life as well.[5] And just as an animate entity such as an animal *is* as long as it is alive, i.e. as long as it has soul, the essence of the universe itself seems to consist in its having movement, and thereby soul.[6] The universe, then, is 'eternal', i.e. endures, only as long as it has soul; hence also the question whether, if its rotation were taken away, the universe would be destroyed.[7]

If there is such a thing as knowledge of the principles, it will be, here too, a way of knowing peculiar to them. Here again, Theophrastus points out, differences obtain: in the case of the study of the principles, too, a distinction should be made according to the different kinds of principles involved.[8] The ease with which his use of ἀρχαί[9] shifts between unmoved first principles

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[1] Presumably both questions are covered by ἐν τίσιν τὰ ὄντα, 12 a 1-2.

[2] 7 b 15-22.

[3] Cp. EDELSTEIN (1966) 20-1.

[4] Cp. 5 b 5-7.

[5] 10 a 9-19. οἷον (ζωή τις), 10 a 15 aptly expresses that the term is used more properly in a different context. For the idea that what imparts movement need not always be different from what is moved διὰ τὸ ποιεῖν καὶ πάσχειν (as seems to be confirmed by sense-perception: 7 b 19-23), cp. what is said about seeds in *CP* IV.1.3: (we must start from the principle that) τὸ σπέρμα μὴ μόνον ἔχειν δύναμιν τῷ ποιεῖν ἀλλὰ καὶ τῷ πάσχειν, ὥσπερ καὶ κατὰ πάντων τῶν τῆς φύσεως ἀληθές· καὶ κατ' αὐτὴν δὲ τὴν γένεσιν ἀμφοῖν εἶναι τὴν ἐνέργειαν, καὶ τρόπον τινὰ οὐχ ἧττον τῷ πάσχειν, τότε γὰρ καὶ ἡ ἐν τοῖς σπέρμασιν κινεῖται δύναμις οἷον διαθερμαινομένων. διὸ καὶ οὐ πάντα βλαστάνει κατὰ τὴν αὐτὴν αἰτίαν, ἀλλ' ὅταν ἡ αἰτία τοῦ ἀέρος κατάσχῃ κρᾶσις.

[6] Cp. 5 b 3.

[7] 6 a 12-4.

[8] 9 a 18-21. Cp. however Ch. I, 4 b 8-11 where it seems to be implied that the likelihood of the ἀρχή being *one* should have consequences for the θεωρία involved, too.

[9] Cp. also the use of τὰ πρῶτα, 11 b 13 (contrast e.g. 4 a 5). Cp. Arist. *Met.* 1070 b 22-4 ἐπεὶ δὲ οὐ μόνον τὰ ἐνυπάρχοντα αἴτια, ἀλλὰ καὶ τῶν ἐκτὸς οἷον τὸ κινοῦν, δῆλον ὅτι ἕτερον ἀρχὴ καὶ στοιχεῖον, αἴτια δ' ἄμφω ...

and elementary principles may seem to testify to the telling view that both belong to the same class after all.[1]

Where the elementary principles are concerned, knowledge of some kind of being seems to be involved, although admittedly what may be called a limiting case of 'kind', namely completely indeterminate being having some δύναμις.[2] In the case of the first principles (or, as Theophrastus argued at the beginning of the treatise, the first principle in the singular), knowledge of a particular entity apparently is what is involved: the οὐσία of the comprehensive whole, which may be characterized as νοῦς, 'the good', or God.[3] The method of knowing involved would seem to consist in an intuition of the human mind,[4] which implies that the investigator cannot be deceived about these principles;[5] it also implies that this knowledge is difficult to communicate.[6] In both cases the mode of 'the same' by means of which the principles are known is analogy. Theophrastus is not very outspoken on this point—testifying, perhaps, to the difficulty of communicating these ultimate truths—, but presumably we are to understand that the elementary principles should be grasped by an analogy with the crafts, or by some other similarity;[7] in the case of the first principle, Theophrastus seems to have in mind an analogy with an animal, a city, or some other composite entity.[8]

In any case, the idea seems to be that the analogon should incorporate various kinds of entities—since the universe comes from, and consists in contraries:[9] both eternal entities and the most short-living ones—so that, as was said above, the analogy with a plant seems to be productive—, both entities that are in rest and entities that are in movement, both unchangeable and changeable things, both complex and simple things, both entities showing a high degree of order and the most disorderly ones, both entities endowed with form and entities having matter (i.e., according to Theophras-

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[1] See p. 16 n. 2 above. Cp. also the smooth transition from the subject of the first principles to Democritus' atoms, 11 b 17-23. R-F *ad* 9 a 13 imply that the elements are part of τὰ κινητὰ καὶ ὑπὸ τὴν φύσιν. The study of the principles itself, if there is a method peculiar to it, seems not to allow of a delimitation of the 'first things' from the things of nature.

[2] 8 a 11-9.

[3] ἡ τοῦ σύμπαντος οὐσία, cp. 10 a 3, 11 b 26. See *ad* οὐκ ἐν τοῖς πρώτοις ... τῆς φύσεως 10 a 6.

[4] 9 a 18-23: αὐτῷ τῷ ἀγνώστῳ 9 a 22, cp. αὐτῷ τῷ νῷ 9 b 14. Since a different aspect or faculty of the same unaccountable entity (i.e., soul) is concerned, the comparison with our seeing things by means of the faculty of perception (τῷ ἀοράτῳ τὸ ὁρατόν 9 a 23) is appropriate.

[5] 9 b 13-6.

[6] 9 b 2 (ἄπορον ἢ) οὐ ῥᾴδιόν γε εἰπεῖν.

[7] 8 a 19-20, 8 a 12. Cp. 7 a 4-6.

[8] 8 a 3-7; also 10 a 15-9, see above.

[9] See p. 31 n. 2 below.

tus, δύναμις) only. The universe, which being applies to in its fullest sense, covering all there is, is by its very comprehensiveness *good.*[1] As the sum total of being essentially comes from, and consists in contraries,[2] Theophrastus ascribes goodness to both of two contraries, (such as eternal and perishable, ordered and orderless, etc.) and to entities representing both of two contraries, because they are all parts of the cosmos. Since it comprises all contraries, the paradox obtains that the good comprises both good and its contrary, the bad or evil, too.[3] The role of evil is at once limited[4]—since all entities, being part of the whole, are good—, and essential, insofar as the material principle constitutes the evil which is a necessary constituent part of reality; in this sense evil too is a great part of reality, since all natural entities involve matter.[5]

For Theophrastus, then, matter is the only entity which may justly be called evil, on the understanding that, as the contrary of the good, it is essential to the cosmos' being good. He does not recognize as evil, in the sense that entities which do not have these characteristics are better than those that have them, things like movement, change, lack of differentiation, disorder.[6] This, then, seems to be at the basis of Theophrastus' criticism of the kind of teleology which assumes that there is a tendency towards the best

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[1] 11 a 25-6; cp. 8 a 6-7.

[2] 7 a 9-10, 11 b 10-2. Cp. Arist. *Met.* 1075 a 28-31 πάντες ... ἐξ ἐναντίων ποιοῦσι πάντα. οὔτε δὲ τὸ πάντα οὔτε τὸ ἐξ ἐναντίων ὀρθῶς, οὔτ' ἐν ὅσοις τὰ ἐναντία ὑπάρχει, πῶς ἐκ τῶν ἐναντίων ἔσται, οὐ λέγουσιν· ἀπαθῆ γὰρ τὰ ἐναντία ὑπ' ἀλλήλων. Th.' insistence on the importance of a symmetry or sympathy between the δύναμις of plants and the conditions of the air (implying unfavourable effects of the absence of symmetry) suggests that he does not subscribe to Aristotle's last remark either (see e.g. *CP* III.10.1 δεῖται δὲ ἑκατέρα τοῦ ἐναντίου, quoted p. 32 n. 2 below). As far as the principles of matter and form are concerned, Th.' conception of the good which (paradoxically) comprises both the good and 'the bad' does, however, to a certain extent fall in with the Aristotelian solution (ἡμῖν δὲ λύεται τοῦτο εὐλόγως τῷ τρίτον τι εἶναι, 1075 a 31-2).

[3] Only in this sense the view brought forward in the present treatise tallies with the conception to be derived from the Arabic translation of the *Meteorology* that the "distinction between God and nature saves God from any diminution of his divine power." Daiber (1992) 290. It is not implied, however, that the supreme entity (i.e. the being of the whole, the good, or God) would not be the cause of the disorder, too, as the Arabic translation of the *Meteor.* has it: "it is not correct (to say) that God should be the cause of disorder in the world; nay, (He is) the cause of its arrangement and order. And that is why we ascribe its arrangement and order to God {mighty and exalted is he!} and the disorder of the world to the nature of the world.", Daiber (1992) 270.—Pace Mansfeld (1992) 324-5. See commentary *ad* 11 b 7-12 (the passage referred to by Daiber 290 n.174).

[4] οὐκ ἐν ἀοριστίᾳ ... μόνον καὶ οἷον ὕλης εἴδει, 11 a 20-1.

[5] 7 a 7-10 (ὡς ἐν ἀμφοῖν τὸ τέλεον, 8-9).

[6] 7 b 5-8; 11 b 12-23; cp. also his argument that rest is superfluous as the object of desire for the heavenly bodies, 5 a 23-5.

(conceived as eternity, order, form)[1] in all things, a conception which, in order to account for reality as it is, requires all kinds of evasion and plain special pleading.[2]

This does not imply that Theophrastus does not recognize some sort of tendency towards the good; but this good amounts to an entity's playing its part in the comprehensive whole.[3] With regard to causal relations, too, no difference in valuation between cause and effect is implied, the entities being interconnected:[4] the heavenly bodies exert influence over the sublunary entities, which in their turn are not without a δύναμις of their own. The most favourable condition for an organism obtains when there is a sympathy between its nature and the external conditions.[5] But even what looks quite random to someone who expects causality to be directed towards one end rather than another[6] is not at all disturbing to someone who takes diversity, complexity, and changeability for granted, or rather, regards these as integral parts of the good.

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[1] Cp. Arist. *DA* 415 a 26 – b 1 φυσικώτατον ... τῶν ἔργων τοῖς ζῶσιν, ..., τὸ ποιῆσαι ἕτερον οἷον αὐτό, ζῷον μὲν ζῷον, φυτὸν δὲ φυτόν, ἵνα τοῦ ἀεὶ καὶ τοῦ θείου μετέχωσιν ᾗ δύνανται· ... (*ad* 4 b 13-6).

[2] See 11 a 8-12. In this respect "Plato and the Pythagoreans" are doing better: 11 a 27 – b 10. Th. himself simply accepts that the opposite of what is good in one case may be good in another; see e.g. *CP* III.10.1 διὸ καὶ τὴν αὐχμώδη καὶ ἄνυδρον σκάπτειν δεῖ καὶ μεταβάλλειν πολλάκις, ὥσπερ καὶ πρότερον εἴρηται· συμφέρει δ' ἡ σκαπάνη καὶ τοῖς ἑλώδεσι καὶ τοῖς ἐφύδροις. καίτοι δόξειεν ἂν ἄτοπον εἰ τοῖς ἐναντίοις· ἀλλ' οὐδὲν ἄτοπον, τὴν μὲν γὰρ ξηραίνει, τὴν δ' ὑγραίνει, δεῖται δὲ ἑκατέρα τοῦ ἐναντίου.

[3] Cp. Arist. *Met.* 1075 a 11-25, a passage which, I think, to some extent approaches Th.' conception of the cosmos; it is different in that the function of Th.' principle could not be compared to that of a general in an army, and in that there is an emphasis on τάξις which is absent in Th.' conception.

[4] "le postulat fondamental de la 'continuité', qui traverse le traité comme un fil rouge", L-M [19]. Cp. the emphasis on συναφή: 4 a 9-10, 14, 20; also the verb 4 b 2, 19. As far as Th. is concerned, the term allows of different degrees of connectedness (see commentary *ad* 4 a 9-10, pp. 86-7). It is noticeably also said of problems, 10 a 19.

[5] ὁ δὲ οἰκεῖος (sc. ἀήρ) ἤδη διατελειοῖ τὰ τῆς φύσεως, *CP* II.3.7. See *ad* τῷ αὐτομάτῳ 10 b 27; also 7 a 22 – b 5; 10 a 25-8; 11 b 5-7. Cp. the title περὶ τῶν κατὰ τόπους διαφορῶν, 350.4 FHS&G, apparently regarding animals, too: 365B.5 FHS&G.

Human ingenuity can help: *CP* III.1.1 (ἡ ἐπίνοια καὶ παρασκευή), ἣν δή φαμεν συνεργεῖν τῇ φύσει πρὸς τὸ τέλος. Sometimes, in the case of plants at any rate, such a condition can be better realized under cultivation, so that, from a teleological point of view, this would be natural to the plant concerned: *CP* I.16.1 ff, see *ad* 10 b 27.

As is well known, as opposed to Aristotle Th. does not conceive of plants as having πράξεις (*HP* I.1.1 τῶν φυτῶν τὰς διαφορὰς καὶ τὴν ἄλλην φύσιν ληπτέον κατά τε τὰ μέρη καὶ τὰ πάθη καὶ τὰς γενέσεις καὶ τοὺς βίους· ἤθη γὰρ καὶ πράξεις οὐκ ἔχουσιν ὥσπερ τὰ ζῷα.— contrast Arist. *HA* 588 b 23-8); this may be connected with the fact that, unlike Aristotle, Th. does not view reproduction as an ἔργον (having teleological implications).

[6] 11 b 12-17; 10 a 28 – b 7. Cp. commentary *ad* ὥς γε δή τινές φασιν 4 a 4.

The questions posed by Theophrastus in the *Metaphysics*, then, seem to touch the core of Peripatetic explanation.[1] The tenor of the questions, the answers given (with varying degrees of circumspection), and above all the unmistakable coherence between these, suggest that some alternative view is taking shape in the argument.[2]

If, then, Theophrastus may be called a teleologist, his views about nature and the cosmos as a whole are clearly not anthropocentric[3]—although, to go by the last words ascribed to him,[4] they are decidedly human.

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[1] Although Th.' argument takes into account various conceptions prevalent in what may be called the Academic-Peripatetic tradition, and makes use of Academic terminology and concepts throughout the treatise (see also p. 11 above), his point of departure in this treatise, quite literally too, is the Aristotelian variety. (See e.g. *ad* καὶ ἀμεταβλήτοις, 4 a 8, p. 82-3 below and Ch. I, *passim*).

[2] Cp. THEILER (1958) 105; REALE (1976) 134, 137; VAN RAALTE (1988) 204-8. Also e.g. SIEBECK (1888), GRUMACH (1932).

[3] *Contra* VALLANCE (1988) 39: "an anthropocentric teleologist Theophrastus certainly was".

[4] See p. 1 above.

TEXT

AND

TRANSLATION

Note to Text and Translation

The chapter headings in roman capitals are largely USENER's (1890); cp. R-F. The paragraph numbering in the left hand margin of the Greek text is USENER's; the same applies to the page numbering in the right hand margin of the Greek text (4 a 2 etc.), which as a result sometimes differs from that of R-F
The paragraph numbering in the English translation (I.1 etc.) is mine.

The Greek text is not accompanied by an *apparatus criticus*. A succinct apparatus is presented, wherever considered relevant, in the commentary immediately below the heading of the lemma in question. For all matters relating to the manuscript tradition and the use of sigla the reader is referred to L-M.

1 **I** πῶς ἀφορίσαι δεῖ καὶ ποίοις τὴν ὑπὲρ τῶν 4 a 2
πρώτων θεωρίαν; ἡ γὰρ δὴ τῆς φύσεως πολυ-
χουστέρα καὶ (ὥς γε δή τινές φασιν) ἀτακτοτέρα,
μεταβολὰς ἔχουσα παντοίας, ἡ δὲ τῶν πρώτων 4 a 5
ὡρισμένη καὶ ἀεὶ κατὰ ταὐτά· διὸ δὴ καὶ ἐν νοη-
τοῖς, οὐκ αἰσθητοῖς αὐτὴν τιθέασιν ὡς ἀκινήτοις
καὶ ἀμεταβλήτοις, καὶ τὸ ὅλον δὲ σεμνοτέραν καὶ
μείζω νομίζουσιν αὐτήν.

2 ἀρχὴ δέ, πότερα συν- (9)
αφή τις καὶ οἷον κοινωνία πρὸς ἄλληλα τοῖς τε 4 a 10
νοητοῖς καὶ τοῖς τῆς φύσεως, ἢ οὐδεμία ἀλλ' ὥσ-
περ ἑκάτερα κεχωρισμένα, συνεργοῦντα δέ πως εἰς
τὴν πᾶσαν οὐσίαν. εὐλογώτερον δ' οὖν εἶναί τινα
συναφὴν καὶ μὴ ἐπεισοδιῶδες τὸ πᾶν, ἀλλ' οἷον
τὰ μὲν πρότερα τὰ δ' ὕστερα, καὶ ἀρχὰς τὰ δ' 4 a 15
ὑπὸ τὰς ἀρχάς, ὥσπερ καὶ τὰ ἀίδια τῶν φθαρ-
τῶν.

εἰ δ' οὖν οὕτω, τίς ἡ φύσις αὐτῶν καὶ ἐν (17)
3 ποίοις; εἰ μὲν γὰρ ἐν τοῖς μαθηματικοῖς μόνον
τὰ νοητά, καθάπερ τινές φασιν, οὔτ' ἄγαν εὔ-
σημος ἡ συναφὴ τοῖς αἰσθητοῖς, οὔθ' ὅλως ἀξιό- 4 a 20
χρεα φαίνεται τοῦ παντός· οἷον γὰρ μεμηχανημένα
δοκεῖ δι' ἡμῶν εἶναι σχήματά τε καὶ μορφὰς καὶ
λόγους περιτιθέντων, αὐτὰ δὲ δι' αὐτῶν οὐδεμίαν (23)
ἔχει φύσιν· εἰ δὲ μή, οὐχ ὥστε συνάπτειν 4 b 2
τοῖς τῆς φύσεως ὥστ' ἐμποιῆσαι καθάπερ ζωὴν
καὶ κίνησιν αὐτοῖς· οὐδὲ γὰρ αὐτὸς ὁ ἀριθμός,
ὅνπερ δὴ πρῶτον καὶ κυριώτατόν τινες τιθέασιν. 4 b 5

I.1 How, and by what sort of characteristics, should one delimit the study of the first things? For the study of nature is more diverse and (according to some people at least) less orderly, involving all kinds of change; that of the first things, on the other hand, is definite and always the same. That obviously is also why people place it in the realm of the objects not of sense but of the intellect, as being free from both motion and change, and consider it on the whole to be a more dignified and greater study.

I.2 The first question is whether there is some connection and (so to speak) community between the objects of the intellect and the things of nature, or whether there is none, but the two are like separate domains which, however, somehow cooperate to bring about being as a whole. It is at any rate more reasonable that there *is* some connection and that the universe is not incoherent, but that, for instance, some things are prior and others posterior, that there are principles and other things subordinate to the principles, just as the eternal things too in relation to the perishable.

I.3 But, then, if it is like this, what is the nature of these entities and in what sort of things are they to be found? For if it is only in the mathematicals that the objects of thought are to be found (as some people maintain), their connection with the objects of sense is not too clearly marked, nor do they appear to be worthy of the universe at all; for they seem to be, (so to speak) products contrived by us as we invest <things> with figures, shapes, and proportions—but they themselves by themselves have no nature at all. And if they *have* one, then they do not have such a one as to connect with the things of nature so as to produce in them things like life and movement; for not even number itself <has the power to do so>—which is as we know what some hold to be primary and supreme.

4 εἰ δ' ἑτέρα τις οὐσία προτέρα καὶ κρείττων ἐστίν,
ταύτην πειρατέον λέγειν πότερον μία τις κατ'
ἀριθμὸν ἢ κατ' εἶδος ἢ κατὰ γένος. εὐλογώτερον
δ' οὖν ἀρχῆς φύσιν ἐχούσας ἐν ὀλίγοις
εἶναι καὶ περιττοῖς—εἰ μὴ ἄρα καὶ πρώτοις καὶ ἐν 4 b 10
τῷ πρώτῳ.
τίς δ' οὖν αὕτη (καὶ τίνες, εἰ πλείους) (11)
πειρατέον ἐμφαίνειν ἁμῶς γέ πως, εἴτε κατ' ἀνα-
λογίαν εἴτε κατ' ἄλλην ὁμοίωσιν. ἀνάγκη δ' ἴσως
δυνάμει τινὶ καὶ ὑπεροχῇ τῶν ἄλλων λαμβάνειν,
ὥσπερ ἂν εἰ τὸν θεόν· θεία γὰρ ἡ πάντων ἀρχή, 4 b 15
δι' ἧς ἅπαντα καὶ ἔστιν καὶ διαμένει. —τάχα μὲν
οὖν ῥᾴδιον τὸ οὕτως ἀποδοῦναι, χαλεπὸν δὲ σα-
φεστέρως ἢ πειστικωτέρως.
5 τοιαύτης δ' οὔσης (18)
τῆς ἀρχῆς, ἐπείπερ συνάπτει τοῖς αἰσθητοῖς, ἡ
δὲ φύσις (ὡς ἁπλῶς εἰπεῖν) ἐν κινήσει καὶ τοῦτ' 4 b 20
αὐτῆς τὸ ἴδιον, δῆλον ὡς αἰτίαν θετέον ταύτην
τῆς κινήσεως· ἐπεὶ δ' ἀκίνητος καθ' αὑτήν, φα-
νερὸν ὡς οὐκ ἂν εἴη τῷ κινεῖσθαι τοῖς τῆς φύ-
σεως αἰτία. ἀλλὰ λοιπὸν ἄλλῃ τινὶ δυνάμει κρείτ- 5 a 1
τονι καὶ προτέρᾳ· τοιαύτη δ' ἡ τοῦ ὀρεκτοῦ φύ-
σις, ἀφ' ἧς ἡ κυκλικὴ ἡ συνεχὴς καὶ
ἄπαυστος. ὥστε κατ' ἐκεῖνο λύοιτο ἂν τὸ μὴ εἶναι
κινήσεως ἀρχὴν ἢ εἰ κινούμενον κινήσει. 5 a 5
6 μέχρι (5)
μὲν δὴ τούτων οἷον ἄρτιος ὁ λόγος, ἀρχήν τε
ποιῶν μίαν πάντων καὶ τὴν ἐνέργειαν καὶ τὴν
οὐσίαν ἀποδιδούς, ἔτι δὲ μὴ διαιρετὸν μηδὲ ποσόν
τι λέγων ἀλλ' ἁπλῶς ἐξαίρων εἰς κρείττω τινὰ
μερίδα καὶ θειοτέραν. οὕτω γὰρ μᾶλλον ἀποδο- 5 a 10
τέον ἢ τὸ διαιρετὸν καὶ μεριστὸν ἀφαιρετέον·

I.4 But if some other entity is prior to and more powerful than these, of this we should try to say whether it is one thing in number, or in species, or in genus. It is, at any rate, more reasonable that, having the nature of a principle, they consist in few things and things out of the ordinary—that is, if not actually in first things and in the very first thing of all.

Now then what this entity is—or what entities, if they are more than one—we should try to make clear in some way or other, be it by analogy or by another similarity. And presumably it is necessary to grasp it by virtue of some power and superiority over the other entities, as if we were dealing with God: for the principle of all things, by virtue of which all things both are and endure, is divine.

—It may, then, be easy to give an account of it in this manner: it is difficult to do so more clearly or more persuasively.

I.5 Such being the principle that we are looking for, if it is true that it connects with the objects of sense, and nature is, generally speaking, in movement and that this is its distinctive property, it is evident that we should hold that principle to be the cause of movement. And since it is without movement in virtue of itself, it is clear that it cannot possibly be by being in movement that it serves as a cause for the things of nature. But there remains the possibility that it is by some other, more powerful and prior capacity: and such is the nature of the object of desire, from which the circular movement arises which is continuous and neverending. So that in this way one could solve <the problem> that there is no principle of movement unless it will impart movement by being in movement itself.

I.6 So far, then, the account (so to speak) fits well together—both establishing one principle for all things and assigning the activity and the being that are involved, and, furthermore, not saying that it is divisible or quantitative but simply raising it to some more powerful and more divine class. For we should account for it in this manner rather than take from it the possibil-

ἅμα γὰρ ἐν ὑψηλοτέρῳ τε καὶ ἀληθινωτέρῳ λόγῳ
τοῖς λέγουσιν ἡ ἀπόφασις.

7 **II** τὸ δὲ μετὰ ταῦτ' ἤδη λόγου δεῖται πλείονος
περὶ τῆς ἐφέσεως, ποία καὶ τίνων, ἐπειδὴ πλείω
τὰ κυκλικὰ καὶ αἱ φοραὶ τρόπον τινὰ ὑπεναντίαι.
(καὶ τὸ ἀνήνυτον· καὶ οὗ χάριν ἀφανές.) εἴτε γὰρ
ἓν τὸ κινοῦν, ἄτοπον τὸ μὴ πάντα τὴν αὐτήν·
εἴτε καθ' ἕκαστον ἕτερον, αἵ τ' ἀρχαὶ πλείους,
ὥστε τὸ σύμφωνον αὐτῶν εἰς ὄρεξιν ἰόντων τὴν
8 ἀρίστην οὐθαμῶς φανερόν. (τὸ δὲ κατὰ τὸ πλῆ-
θος τῶν σφαιρῶν τῆς αἰτίας μείζονα ζητεῖ λόγον·
οὐ γὰρ ὅ γε τῶν ἀστρολόγων.)

ἄπορον δὲ καὶ πῶς (23)
ποτε φυσικὴν ὄρεξιν ἐχόντων οὐ τὴν ἠρεμίαν διώ-
κουσιν ἀλλὰ τὴν κίνησιν. τί οὖν ἅμα τῇ μιμήσει
φασὶν ἐκεῖνο, ὁμοίως ὅσοι τε τὸ ἓν καὶ ὅσοι τοὺς ἀρι-
θμοὺς λέγουσιν; (καὶ γὰρ αὐτοὶ ⟨ οἱ ⟩ τοὺς ἀριθμούς
φασιν τὸ ἕν.)

εἰ δ' ἡ ἔφεσις ἄλλως τε καὶ τοῦ (28)
ἀρίστου μετὰ ψυχῆς—εἰ μή τις λέγοι καθ' ὁμοιό-
τητα καὶ μεταφοράν—, ἔμψυχ' ἂν εἴη τὰ κινούμενα.
ψυχὴ δ' ἅμα δοκεῖ καὶ κίνησις ὑπάρχειν (ζωὴ γὰρ
τοῖς ἔχουσιν), ἀφ' ἧς καὶ αἱ ὀρέξεις πρὸς ἕκα-
στον, ὥσπερ καὶ τοῖς ζῴοις, ἐπεὶ καὶ αἱ αἰσθήσεις
καίπερ ἐν τῷ πάσχειν οὖσαι δι' ἑτέρων ὅμως ἐν
9 ψυχῇ γίνονται. εἰ δ' οὖν τῆς κυκλικῆς αἴτιον τὸ
πρῶτον, οὐ τῆς ἀρίστης ἂν εἴη· κρεῖττον γὰρ ἡ
τῆς ψυχῆς, καὶ πρώτη δὴ καὶ μάλιστα ἡ τῆς δια-
νοίας, ἀφ' ἧς καὶ ἡ ὄρεξις.

ity of division and having parts; for the negation belongs to the account which, for those who maintain it, is not only more lofty, but at the same time has more truth.

II.1 The next question after this, however, requires further discussion of the tendency concerned, of what kind it is, and towards which objects, seeing that the bodies moving in a circle are more than one, and their motions somehow opposed <to each other>. (And the fact that it is ineffectual; and <that> for the sake of what is not to be seen.) For if (1)that which imparts movement is one, it is puzzling that all <bodies moving in a circle> do not have the same movement; or (2) it is different for each, and the principles are more than one—so that their harmoniousness as they set out to obey the best desire is by no means evident.

(The question of the number of spheres demands a more substantial account of the cause; for that of the astronomers at any rate <does> not <suffice>.)

II.2 It is problematic, too, how it is that, while having a natural desire, they do not pursue rest but movement. Why, then, do they postulate *that* <end> along with imitation, the adherents of the One and those of the numbers alike? (For the adherents of the numbers themselves too postulate the One.)

II.3 And if the tendency, especially when it is towards the best, involves soul—unless one were speaking by simile and metaphor—, the bodies moving <in virtue of this tendency> would be endowed with soul. Soul seems to be coexistent with movement (for it is life to those who have it), in which indeed the desires towards each object originate, as in the case of animals, too, since sense-perceptions too, although they consist in being affected through other things, yet are produced in soul. If, then, the first <cause> is the cause of the circular movement, it cannot be the cause of the *best* movement: for the movement of the soul is more powerful, and, obviously, first and most of all that of the thinking faculty, in which indeed the desire originates.

τάχα δὲ καὶ τοῦτ' ἂν τις ἐπιζητήσειεν, διὰ τί τὰ κυκλικὰ μόνον ἐφετικά, τῶν δὲ περὶ τὸ μέσον οὐθὲν καίπερ κινητῶν ὄντων, πότερον ὡς ἀδύνατα ἢ ὡς οὐ διικνουμένου τοῦ πρώτου. ἀλλὰ τοῦτό γ' ἄτοπον, εἰ δι' ἀσθένειαν· ἰσχυρότερον γὰρ ἄν τις ἀξιώσειεν τοῦ Ὁμήρου Διός, ὅς φησιν

"αὐτῇ κεν γαίῃ ἐρύσαιμ' αὐτῇ τε θαλάσσῃ".

ἀλλὰ λοιπὸν ὥσπερ ἄδεκτόν τι καὶ ἀσύνδετον εἶναι.

10 τάχα δὲ πρότερον ζητήσειεν ἄν τις πῶς ἔχει, πότερα μέρη ταῦτα ἢ οὐ μέρη τοῦ οὐρανοῦ, καὶ εἰ μέρη, πῶς μέρη· νῦν γὰρ οἷον ἀπεωσμένα τῶν ἐντιμοτάτων οὐ μόνον κατὰ τὰς χώρας ἀλλὰ καὶ κατὰ τὴν ἐνέργειαν, εἴπερ ἡ κυκλικὴ τοιαύτη· συμβαίνει γὰρ οἷον κατὰ συμβεβηκὸς ὑπὸ τῆς κυκλικῆς περιφορᾶς καὶ εἰς τοὺς τόπους καὶ εἰς ἄλληλα τὰς μεταβολάς.

εἰ δὲ καὶ τὸ ἄριστον ἀπὸ τοῦ ἀρίστου, κάλλιον ἄν τι παρὰ τοῦ πρώτου δέοι τῆς κυκλοφορίας—εἰ μὴ ἄρ' ἐκωλύετο τῷ μὴ δύνασθαι δέχεσθαι· τὸ γὰρ δὴ πρῶτον καὶ θειότατον πάντα τὰ ἄριστα βουλόμενον. τάχα δὲ τοῦτο μὲν οἷον ὑπερβατόν τι καὶ ἀζήτητον· ἀξιοῖ γὰρ ὁ τοῦτο λέγων ἅπανθ' ὅμοια καὶ ἐν τοῖς ἀρίστοις εἶναι, μικράν τιν' ἢ μηδεμίαν ἔχοντα διαφοράν.

11 τόδε δ' ἄν τις ἴσως ἀπορήσειεν πρὸς αὐτὸν τὸν πρῶτον οὐρανὸν ἀναφέρων, πότερον ἡ περιφορὰ τῆς οὐσίας ἐστὶν αὐτοῦ (καὶ ἅμα τῷ πεπαῦσθαι φθείροιτ' ἄν), ἢ εἴπερ ἐφέσει τινὶ καὶ ὀρέξει, κατὰ συμβεβηκός· εἰ μὴ ἄρα σύμφυτον αὐτῷ τὸ ὀρέγεσθαι· καὶ οὐθὲν κωλύει τοιαῦτ' ἄττα τῶν ὄντων ὑπάρ-

II.4 Perhaps one might ask this further question, too, why only the bodies moving in a circle are tendency-driven, and none of those around the centre, although they are movable, whether this is because they are incapable of doing so or because the first principle does not penetrate to them. *This* in any case would be absurd, if it were from weakness; for one would expect <the first principle> to be stronger than Homer's Zeus, who says "I could haul you up, earth, sea, and all". There remains the possibility that <the entities around the centre> are like something unreceptive and unconnected.

And one might perhaps investigate first, whether these entities are or are not parts of the cosmos, and if they are parts, in what sense <they are>; for now they are (so to speak) thrust away from the things most esteemed, not only as regards their position but also as regards their activity—assuming that the circular movement is such: for it happens to be the case that the changes <of things>—both towards their places and to one another—occur (so to speak) accidentally under the influence of the circular rotation.

II.5 And also, if the best comes from the best, something better might be required from the first principle than the rotation discussed—that is, unless they were prevented by not being capable of receiving it; for obviously the first and most divine <operates> wishing all things to be the best. But maybe this is something that is (so to speak) excessive, and not to be looked for; for he who makes this assertion expects all things to be alike and to consist in the best things, containing little or no difference.

II.6 And one might perhaps raise the following problem, referring <the question> to the first heaven itself, whether the rotation is of its essence (and as soon as this had stopped it would be destroyed), or, assuming that <it happens> by virtue of some tendency and desire, accidental;—that is, unless feeling desire is innate in the first heaven; and nothing prevents some such things from existing among what is there.

χειν. ἴσως δ' ἂν εἴη καὶ ἀφελόντα τὴν ὄρεξιν
ὑπὲρ αὐτῆς τῆς κινήσεως ἀπορεῖν, εἰ ἀφαιρεθεῖσα
φθείροι ἂν τὸν οὐρανόν. καὶ τοῦτο μὲν ὥσπερ
ἑτέρων λόγων. 6 a 15

III ἀπὸ δ' οὖν ταύτης ἢ τούτων τῶν (15)
ἀρχῶν ἀξιώσειεν ἄν τις (τάχα δὲ καὶ ἀπὸ τῶν
ἄλλων, ἃς ἄν τις τίθηται) τὰ ἐφεξῆς εὐθὺς ἀποδι-
δόναι, καὶ μὴ μέχρι του προελθόντα παύεσθαι·
τοῦτο γὰρ τελέου καὶ φρονοῦντος, ὅπερ Ἀρχύτας
ποτ' ἔφη ποιεῖν Εὔρυτον διατιθέντα τινὰς ψή- 6 a 20
φους· λέγειν γὰρ ὡς ὅδε μὲν ἀνθρώπου ὁ ἀρι-
θμός, ὅδε δὲ ἵππου, ὅδε δ' ἄλλου τινὸς τυγχάνει.
νῦν δ' οἵ γε πολλοὶ μέχρι τινὸς ἐλθόντες κατα-
12 παύονται, καθάπερ καὶ οἱ τὸ ἓν καὶ τὴν ἀόριστον
δυάδα ποιοῦντες· τοὺς γὰρ ἀριθμοὺς γεννήσαντες 6 a 25
καὶ τὰ ἐπίπεδα καὶ τὰ σώματα σχεδὸν τἆλλα
παραλείπουσιν πλὴν ὅσον ἐφαπτόμενοι, καὶ το-
σοῦτο μόνον δηλοῦντες, ὅτι τὰ μὲν ἀπὸ τῆς ἀορί-
στου δυάδος, οἷον τόπος καὶ κενὸν καὶ ἄπειρον, 6 b 1
τὰ δ' ἀπὸ τῶν ἀριθμῶν καὶ τοῦ ἑνός, οἷον ψυχὴ
καὶ ἄλλ' ἄττα (χρόνον δ' ἅμα καὶ οὐρανὸν καὶ
ἕτερα δὴ πλείω)· τοῦ δ' οὐρανοῦ πέρι καὶ τῶν λοι-
πῶν οὐδεμίαν ἔτι ποιοῦνται μνείαν. ὡσαύτως δ' 6 b 5
οἱ περὶ Σπεύσιππον, οὐδὲ τῶν ἄλλων οὐθεὶς πλὴν
Ξενοκράτης· οὗτος γὰρ ἅπαντά πως διατίθησιν
περὶ τὸν κόσμον, ὁμοίως αἰσθητὰ καὶ νοητὰ καὶ
13 μαθηματικὰ καὶ ἔτι δὴ τὰ θεῖα. πειρᾶται δὲ καὶ
Ἑστιαῖος μέχρι τινός· οὐχ, ὥσπερ εἴρηται, περὶ 6 b 10
τῶν πρώτων μόνον. Πλάτων μὲν οὖν ἐν τῷ ἀνά-
γειν εἰς τὰς ἀρχὰς δόξειεν ἂν ἅπτεσθαι τῶν ἄλ-
λων εἰς τὰς ἰδέας ἀνάπτων, ταύτας δ' εἰς τοὺς

And perhaps one might also, taking away the desire, raise a problem about the movement itself, whether its being taken away would destroy the cosmos. Now this too, one would say, belongs to another discussion.

III.1 At any rate, starting from this principle or these principles, one might expect (and perhaps also from other principles which one may assume) one to go on at once to give an account of the subsequent levels of being, and not to proceed to a certain point and then stop; for this is characteristic of a complete & sane person, to do what Archytas once said Eurytus did while arranging kinds of pebbles: to say (that is) that this is actually the number of man, this of horse, and this of some other thing.

III.2 But as it is, most people go to a certain point and leave off there, as do those who posit the One and the indefinite dyad; for having generated the numbers, planes, and solids they leave out practically everything else, except so much as they do lay hold of, and making clear only this much, that some things come from the indefinite dyad, such as place, void, and infinite, and others from the numbers and the One, such as soul and certain other things (time, and heaven together with it, and of course several other things); but of the heavens and the rest they no longer make any mention at all. And in the same way those around Speusippus <do not meet this expectation>; nor any of the others, except Xenocrates: for he somehow assigns a place to all things in the cosmos alike, objects of sense, objects of thought, mathematicals, and besides, of course, the divine. And Hestiaeus too makes the effort (up to a certain point); not, as has been said, about the first things only.

Plato, then, in referring <things> to the principles might seem to take hold of the other entities while linking them up with the Ideas, and these with the numbers, and from these to the prin-

ἀριθμούς, ἐκ δὲ τούτων εἰς τὰς ἀρχάς· εἶτα κατὰ
τὴν γένεσιν μέχρι τῶν εἰρημένων. οἱ δὲ 6 b 15
τῶν ἀρχῶν μόνον. ἔνιοι δὲ καὶ τὴν ἀλήθειαν ἐν
τούτοις· τὰ γὰρ ὄντα μόνον περὶ τὰς ἀρχάς.

συμ- (17)
βαίνει δὲ τοὐναντίον ἢ ἐν ταῖς ἄλλαις μεθόδοις·
ἐν ἐκείνοις γὰρ τὰ μετὰ τὰς ἀρχὰς ἰσχυρότερα
καὶ οἷον τελεώτερα τῶν ἐπιστημῶν. τάχα δὲ καὶ 6 b 20
εὐλόγως· ἔνθα μὲν γὰρ τῶν ἀρχῶν, ἐν δὲ ταῖς
λοιπαῖς ἀπὸ τῶν ἀρχῶν ἡ ζήτησις.

14 **IV** πῶς δέ ποτε χρὴ καὶ ποίας τὰς ἀρχὰς ὑπο-
θέσθαι τάχ' ἂν ἀπορήσειέν τις, πότερον ἀμόρ-
φους καὶ οἷον δυναμικάς, ὥσπερ ὅσοι πῦρ καὶ 6 b 25
γῆν, ἢ μεμορφωμένας, ὡς μάλιστα δέον ταύτας
ὡρίσθαι, καθάπερ ἐν τῷ Τιμαίῳ φησίν· τοῖς γὰρ
τιμιωτάτοις οἰκειότατον ἡ τάξις καὶ τὸ ὡρίσθαι.
φαίνεται δὲ καὶ ἐν ταῖς λοιπαῖς σχεδὸν ἔχειν 7 a 1
οὕτω, καθάπερ ἐν γραμματικῇ καὶ μουσικῇ καὶ
ταῖς μαθηματικαῖς· συνακολουθεῖ δὲ καὶ τὰ μετὰ
τὰς ἀρχάς. ἔτι δὲ καὶ κατὰ τὰς τέχνας ὁμοίως,
αἵπερ τὴν φύσιν μιμοῦνται· καὶ τὰ ὄργανα καὶ 7 a 5
τὰ ἄλλα κατὰ τὰς ἀρχάς.

οἱ μὲν οὖν ἐμμόρφους (6)
πάσας, οἱ δὲ μόνον τὰς ὑλικάς· οἱ δ' ἄμφω, τάς
τ' ἐμμόρφους καὶ τὰς τῆς ὕλης, ὡς ἐν ἀμφοῖν
τὸ τέλεον· οἷον γὰρ ἐξ ἀντικειμένων τὴν
15 ἅπασαν οὐσίαν. 7 a 10

ἄλογον δὲ κἀκείνοις δόξειεν ἄν, (10)
εἰ ὁ μὲν ὅλος οὐρανὸς καὶ ἕκαστα τῶν μερῶν
ἅπαντ' ἐν τάξει καὶ λόγῳ, καὶ μορφαῖς καὶ δυνά-

ciples; and then, proceeding along the order of generation, down to the entities discussed. But others <take hold> of the principles only. And some find even the truth in these: for reality is only in the realm of the principles.

III.3 What happens is the opposite of what happens in the other disciplines: for in these what comes after the principles is the stronger and (so to speak) more complete part of the sciences concerned. And perhaps this is also what could be expected: for here the search is for the principles, whereas in the rest it starts from the principles.

IV.1 One might raise the problem how, and of what nature one should suppose the principles to be: whether they are shapeless and (so to speak) full of potential, as assumed by those who <posit as principles> fire and earth, or shaped—considering that these above all must be definite, as <Plato> says in the *Timaeus*: for it is in the most valuable things that order and being definite are most properly at home.

And also by and large in all the remaining <sciences> it appears to be like this, as for instance in grammatical and musical and the mathematical sciences; and what comes after the principles follows, too. And again, it is similar also for the crafts—which indeed imitate nature: both the instruments and the other things are in accordance with the principles.

IV.2 Some, then, <assume that> all principles are endowed with shape, others <assume> only the material ones; but others both, those endowed with shape as well as those of matter, considering that the complete consists in both: for the totality of being they take to come (so to speak) from opposites. But it might seem unreasonable even to them if, on the one hand, the whole cosmos and every part of it were in order and proportion in re-

μεσιν καὶ περιόδοις, ἐν δὲ ταῖς ἀρχαῖς μηθὲν τοιοῦτον ἀλλ' ὥσπερ "σωρὸς εἰκῇ κεχυμένων ὁ κάλλιστος" (φησὶν Ἡράκλειτος) "ὁ Κόσμος". καὶ 7 a 15
κατὰ τοὐλάχιστον δ' ὡς εἰπεῖν λαμβάνουσιν ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις· ὡρισμέναι γὰρ ἑκάστων αἱ φύσεις ὡς εἰπεῖν, καίπερ αὐτομάτως γινομένων· τὰς δ' ἀρχὰς ἀορίστους εἶναι.

χαλεπὸν δὲ πάλιν αὐτὸ ⟨τὸ⟩ τοὺς λόγους ἑκάστοις περιθεῖναι 7 a 20
πρὸς τὸ ἕνεκά του συνάγοντας ἐν ἅπασιν, καὶ ἐν ζῴοις καὶ φυτοῖς καὶ ἐν αὐτῇ πομφόλυγι· πλὴν εἰ συμβαίνει τῇ ἑτέρων τάξει καὶ μεταβολῇ μορφάς τε παντοίας καὶ ποικιλίας γίνεσθαι τῶν περὶ 7 b 1
τὸν ἀέρα καὶ τὴν γῆν· ὧν δὴ μέγιστόν τινες παράδειγμα ποιοῦνται τὰ περὶ τὰς ὥρας τὰς ἐτησίους, ἐν αἷς καὶ ζῴων καὶ φυτῶν καὶ καρπῶν γενέσεις, οἷον γεννῶντος τοῦ ἡλίου. 7 b 5

καὶ ταῦτα (5)
μὲν ἐνταῦθά που ζητεῖ τὴν σκέψιν, ἀφορισμὸν ἀπαιτοῦντα μέχρι πόσου τὸ τεταγμένον, καὶ διὰ τί τὸ πλέον ἀδύνατον ἢ εἰς τὸ χεῖρον ἡ μετάβασις.

16 **V** ἐν δὲ ταῖς ἀρχαῖς, ὅθεν δὴ καὶ ὁ πρῶτος λόγος, εἰκότως ἄν τις καὶ τὸ περὶ τῆς ἠρεμίας ἀπο- 7 b 10
ρήσειεν· εἰ μὲν γὰρ ὡς βέλτιον, ἀνάψειεν ἂν ταῖς ἀρχαῖς· εἰ δ' ὡς ἀργία καὶ στέρησίς τις κινήσεως, οὐκ ἀνάψει, ἀλλ' εἴπερ, τὴν ἐνέργειαν ἀντιμεταλλακτέον ὡς προτέραν καὶ τιμιωτέραν, τὴν δὲ κίνησιν ἐν τοῖς αἰσθητοῖς· ἐπεὶ τό γε διὰ τοῦτ' 7 b 15
ἠρεμεῖν ὡς ἀδύνατον ἀεὶ κινούμενον εἶναι τὸ κινοῦν (οὐ γὰρ ἂν εἴη πρῶτον) κίνδυνος μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον, ἀλλὰ μείζω

spect of shapes, capacities, and periods, while on the other hand in the principles there would be nothing of the kind but, one would say, "a heap of things poured out at random is the one who carries off the prize for beauty" (Heraclitus says) "the World-order". But even down to the tiniest entity virtually they take it to be thus, in animate and inanimate things alike: for the natures of practically speaking each entity, even when generated spontaneously, are definite; but the principles are said to be indefinite.

But again, the actual assignment of a formal account to each entity by referring to something for the sake of which in all cases is difficult, in the case of animals and plants and in the very bubble;—unless it happens through the order and change of other things that all sorts of shapes and varieties of things in the air and on earth arise; the main example of which according to some are the facts of the yearly return of the seasons, on which generations of animals, plants, and fruits depend—the sun being, so to speak, the begetter.

IV.3 These questions too call for an inquiry into them somewhere here, requiring as they do a delimitation of how far the ordered extends, and why more of it is impossible or the change would be for the worse.

V.1 In the case of the principles however, from which the first argument started too, one might reasonably raise a problem with regard to the question of their rest, too; for if as a better state, then one might well attach it to the principles; but if as inactivity and a privation of movement, then one will not do so—but if anything, adopt 'activity' instead as being prior and more valuable, and <locate> movement in the objects of sense: for in any case the argument that <the principles> are in rest for the reason that it is impossible that what imparts movement is <itself> invariably in movement (for then it could not possibly be first), risks being merely verbal, and is not worthy of belief otherwise but calls for

τινὰ αἰτίαν ζητεῖ. δοκεῖ δὲ καὶ ἡ αἴσθησις τρόπον
τινὰ συναυδᾶν ὡς ἐνδεχόμενον μὴ ἀεὶ τὸ κι- 7 b 20
νοῦν ἕτερον εἶναι καὶ ὃ κινεῖ διὰ τὸ ποιεῖν
καὶ πάσχειν. ἔτι δ' ἐάν τις ἐπ' αὐτὸν ἄγῃ τὸν
νοῦν καὶ τὸν θεόν.

ἄτοπον δὲ καὶ τὸ ἕτερον λε- (23)
χθέν, ὡς οὐ μιμοῦνται τὰ ὀρεγόμενα τοῦ ἠρεμοῦν- 8 a 1
τος· εἰ γὰρ αὐτοῖς οὐ συνακολουθεῖ ἡ τῶν ἄλλων ...·
πλὴν ἴσως οὐχ ὁμοίως ληπτέον ὡς εἰς τὸ ἀμερὲς
ἄγοντας, ἀλλ' ὅπως ὅτι μάλιστα σύμφωνον ἑαυ-
τῷ καὶ ἀπηρτισμένον, ὡς ἂν πόλις ἢ ζῷον ἢ ἄλλο 8 a 5
τι τῶν μεριστῶν, ᾗ καὶ ὁ ὅλος οὐρανός, ὃν δή
φασιν εἶναι τελεώτατον.

17 **VI** ἐπιποθεῖ δέ τινα καὶ τὰ τοιάδε λόγον, πῶς
ποτε τῶν ὄντων ὁ μερισμὸς εἰς ὕλην καὶ μορ-
φήν, πότερον ὡς τὸ μὲν ὄν, τὸ δὲ μὴ ὄν, δυνά- 8 a 10
μει δ' ὂν καὶ ἀγόμενον εἰς ἐνέργειαν· ἢ ὂν μέν,
ἀόριστον δὲ καθάπερ ἐν ταῖς τέχναις, ἡ δὲ γέ-
νεσις ἢ οὐσία γ' αὐτῶν τῷ μορφοῦσθαι κατὰ
τοὺς λόγους· ἀλλ' οὕτω γ' εἰς μὲν τὸ βέλτιον
τάχ' ἂν ἡ μετάβασις εἴη, τὸ δ' εἶναι οὐθὲν ἂν 8 a 15
ἧττον ἀληθὲς ὑπάρχοι κατ' αὐτὴν (οὐ γὰρ ἂν
οὐδὲ γίνοιτο μὴ ὑπαρχούσης), ἀλλὰ τὸ μήτε τόδε
μήτε ποιὸν μήτε ποσόν, ὡς ἀόριστον τοῖς εἴδεσιν,
δύναμιν δέ τιν' ἔχον. ὅλως δὲ κατ' ἀναλογίαν
ληπτέον ἐπὶ τὰς τέχνας καὶ εἴ τις ὁμοιότης ἄλλη. 8 a 20

18 **VII** δόξειεν δ' ἂν καὶ τοῦτ' ἔχειν ἀπορίαν, εἰ μὴ
ἄρα περιεργίαν τοῦ ζητεῖν, τί δή ποτε ἡ φύσις
καὶ ἡ ὅλη δ' οὐσία τοῦ παντὸς ἐν ἐναντίοις ἐστίν,
καὶ σχεδὸν ἰσομοιρεῖ τὸ χεῖρον τῷ βελτίονι (μᾶλ-

a more substantial explanation. Sense-perception, too, seems in some manner to second the suggestion that what imparts movement need not always be different from what is moved by it on account of the acting-and-being-acted-upon. And again if one takes <the question> further to mind itself and to God.

V.2 The other point that we have mentioned, that the entities which desire for what is in rest do not imitate it, is puzzling too. For if the desire on the part of the other things does not follow these ...; except that, perhaps, one should not assume <all things> to be in the same way by leading them towards the partless, but rather see to it that the whole cosmos too shall be maximally in harmony with itself and perfect (like a city or an animal or some other composite entity), which as we know they claim to be most complete of all things.

VI The following points, too, demand some further discussion, how the division of reality into matter and shape is to be conceived—whether as: the one being, the other not-being but being potentially and heading for actuality, or as: being indeed, but indeterminate as in the case of the crafts, and the generation—or rather, the essence—of things <coming to pass> by their being shaped according to the formula applying in each case. But if thus conceived, while the change may perhaps be for the better, being would nevertheless truly exist in respect of matter (for things cannot possibly even be generated if matter does not exist), but being that is neither this particular thing, nor of a certain quality, nor of a certain quantity, as being indeterminate with regard to the kinds involved, but having some capacity. And in general, the situation should be grasped by analogy with reference to the crafts, or any other similarity there may be.

VII.1 And this, too, might seem to involve a problem—that is, if not an officiousness in asking—why it is that nature, and the whole being of the universe too, consists in contraries, and that the worse has a share practically equal to the better (or rather

λον δὲ καὶ πολλῷ πλέον ἐστίν), ὥστε δοκεῖν καὶ 8 a 25
Εὐριπίδην καθόλου λέγειν ὡς "οὐκ ἂν γένοιτο
χωρὶς ἐσθλά". ὁ δὲ τοιοῦτος λόγος ἐγγὺς τοῦ
ζητεῖν ὅτι οὐ πάντ' ἀγαθὰ οὐδὲ πάντα ὅμοια, 8 b 1
καὶ ὅτι κατὰ πάντων μὲν τὸ εἶναι λέγομεν, οὐ-
θὲν δὲ ὅμοιον ἀλλήλοις, καθάπερ τὰ λευκὰ καὶ
μέλανα, ἐν αὐτοῖς.

ἔτι δὲ τὸ δοκοῦν παραδοξότε- (4)
ρον, ὡς οὐχ οἷόν τε τὸ ὂν ἄνευ τῶν ἐναντίων. 8 b 5
οἱ δ' ἔτι πλέονι τῷ παραδόξῳ χρώμενοι καὶ τὸ
μὴ ὂν μηδὲ γεγονὸς μηδὲ μέλλον προσκαταριθμοῦ-
σιν εἰς τὴν τοῦ παντὸς φύσιν· ἀλλ' ἥδε μὲν οἷον
ὑπερβατός τις σοφία.

19 **VIII** τὸ δὲ ὂν ὅτι πολλαχῶς, φανερόν. ἡ γὰρ αἴ- 8 b 10
σθησις καὶ τὰς διαφορὰς θεωρεῖ καὶ τὰς αἰτίας ζη-
τεῖ· τάχα δ' ἀληθέστερον εἰπεῖν ὡς ὑποβάλλει τῇ
διανοίᾳ τὰ μὲν ἁπλῶς ζητοῦσα, τὰ δ' ἀπορίαν
ἐνεργαζομένη, δι' ἧς, κἂν μὴ δύνηται προβαίνειν,
ὅμως ἐμφαίνεταί τι φῶς ἐν τῷ μὴ φωτὶ ζητούν- 8 b 15
των ἐπὶ πλέον. τὸ ἐπίστασθαι ἄρα οὐκ ἄνευ δια-
φορᾶς τινος· εἴ τε γὰρ ἕτερα ἀλλήλων διαφορά
τις, ἔν τε τοῖς καθόλου πλειόνων ὄντων τῶν ὑπὸ
τὰ καθόλου διαφέρειν ἀνάγκη καὶ ταῦτα, ἐάν τε
γένη τὰ καθόλου ἐάν τ' εἴδη. 8 b 20

20 σχεδὸν δὲ καὶ ἐπι- (20)
στήμη πᾶσα τῶν ἰδίων· ἥ τε γὰρ οὐσία καὶ τὸ
τί ἦν εἶναι καθ' ἕκαστον ἴδιον, τά τε θεωρούμενα
καθ' ἑαυτὰ καὶ οὐ κατὰ συμβεβηκὸς ἦν ἄν τι κατά
τινος. ὅλως δὲ τὸ ἐν πλείοσιν τὸ αὐτὸ συνι-
δεῖν ἐπιστήμης, ἤτοι κοινῇ καὶ καθόλου λεγόμενον 8 b 25
ἢ ἰδίᾳ πως καθ' ἕκαστον, οἷον ἀριθμοῖς γραμμαῖς,

there is actually much more of it), so that Euripides, too, seems to be making a universal statement when he says "good things cannot come separately". But such a statement comes near to asking why not all things are good nor all things alike, and why we do predicate being of all things, but there is nothing <in which they are> similar to one another, as is the case with white and black things, in them.

VII.2 And even more paradoxical is the view that being cannot exist without the contraries. Those who make even wider use of the paradoxical count in the nature of the universe even that which is not nor has been nor will be; but this is a cleverness that is (so to speak) excessive.

VIII.1 But that 'being' applies in many ways is evident. For perception both observes the differences and seeks the causes; or perhaps it is more in accordance with reality to say that it provides the thinking faculty with suggestions, some by simply seeking, others by producing in it a problem through which, even if it is unable to advance, some light yet appears in what is not light if one seeks further.

Knowing, therefore, does not occur without some difference: for both when one thing is other than another there is a difference, and in the case of the universals, where there is a plural number of things that fall under the universals, these too must necessarily differ, whether the universals are genera or species.

VIII.2 And also, practically every science is of peculiarities: for both the essence or quiddity is peculiar to each particular thing, and things observed <to apply> essentially and not accidentally will prove to be something <observed> of some particular thing. And in general the task of a science is to distinguish what is the same in a plurality of things, whether said of all universally or in some particular way in each case, as in numbers,

ζῴοις φυτοῖς· τέλεος δ' ἡ ἐξ ἀμφοῖν. ἔστιν δ'
ἔνια, ὧν καθόλου τέλος—ἐν τούτῳ γὰρ τὸ
αἴτιον—, τῶν δὲ τὸ ἐν μέρει, καθ' ὅσα διαίρεσις
εἰς τὰ ἄτομα, καθάπερ ἐν τοῖς πρακτοῖς καὶ ποιη-
21 τοῖς· οὕτως γὰρ αὐτῶν ἡ ἐνέργεια. ταὐτῷ δ' ἐπι-
στάμεθα καὶ οὐσίᾳ καὶ ἀριθμῷ καὶ εἴδει καὶ γένει
καὶ ἀναλογίᾳ, καὶ εἰ ἄρα παρὰ ταῦτα διαιρέσεις·
διὰ πλείστου δὲ τὸ κατ' ἀναλογίαν (ὡς ἂν ἀπέ-
χοντες πλεῖστον), τὰ μὲν δι' ἡμᾶς αὐτούς, τὰ δὲ
διὰ τὸ ὑποκείμενον, τὰ δὲ διὰ τἄμφω.

22 πλεοναχῶς δ' ὄντος τοῦ ἐπίστασθαι, πῶς ἕκα-
στα μεταδιωκτέον; ἀρχὴ καὶ μέγιστον ὁ οἰκεῖος
τρόπος, οἷον τὰ πρῶτα καὶ νοητά, καὶ τὰ κινητὰ
καὶ ὑπὸ τὴν φύσιν, αὐτῶν τε τούτων τὰ ἐν ἀρχῇ
καὶ ⟨τὰ⟩ ἑπόμενα, μέχρι ζῴων καὶ φυτῶν καὶ ἐσχά-
των τῶν ἀψύχων· ἔστιν γάρ τι καθ' ἕκαστον γέ-
23 νος ἴδιον, ὥσπερ καὶ ἐν τοῖς μαθηματικοῖς. ἔχει
δὲ καὶ αὐτὰ τὰ μαθήματα διαφορὰν καίπερ ὁμο-
γενῆ πως ὄντα· διῄρηται δ' ἱκανῶς.

εἰ δὲ καὶ ἔνια
γνωστὰ τῷ ἄγνωστα εἶναι, καθάπερ τινές φασιν,
ἴδιος ἂν ὁ τρόπος εἴη, διαιρέσεως δέ τινος δεῖ-
ται. τάχα δ' ἐφ' ὧν ἐνδέχεται κατ' ἀναλογίαν οἰ-
κειότερον λέγειν, ἢ αὐτῷ τῷ ἀγνώστῳ—καθάπερ
εἴ τις τῷ ἀοράτῳ τὸ ὁρατόν.

πόσοι δ' οὖν τρό-
24 ποι καὶ ποσαχῶς τὸ εἰδέναι πειρατέον διελεῖν. ἡ
δ' ἀρχὴ πρὸς αὐτὰ ταῦτα καὶ πρῶτον τὸ ἀφορί-
σαι τί τὸ ἐπίστασθαι. χαλεπώτερον δ' ἂν δόξειεν·
οὐ γὰρ οἷόν τε καθόλου καὶ κοινόν τι λαβεῖν ἐν
τοῖς πλεοναχῶς λεγομένοις.

lines, animals, plants: complete is the science which consists of both. But there are some objects of study of which the end is universal, for in this consists the cause of things; of others, the individual is the end, in those cases where there is division into the indivisible entities, like in the case of things done and things made: for their actuality is such. We know through 'the same' <which is such> either in essence, in number, in species, in genus, by analogy, or any other distinctions there might be besides these; what is the same by analogy spans the widest distance (considering that we are maximally far removed), in some cases <its doing so> being due to ourselves, in others to the subject-matter involved, in others to both.

VIII.3 Since knowing is in various ways, how must its object in each case be pursued? The starting-point and the main thing is the appropriate manner, such as the first and intelligible things, and the things which are movable and fall under the heading of nature —and, among these, those things which have the lead and those which follow, down to animals, plants, and lastly inanimate things; for there is something peculiar to each class of things, as in the case of the mathematical entities, too. And also mathematical studies themselves, though being of the same kind in some way, contain a difference; they have been distinguished sufficiently.

And also, if certain things are known by being unknowable, as some people maintain, the manner would be peculiar <to these>, and requires some differentiation; but perhaps, in those cases where it is possible, it is more appropriate to say <that they are known> by analogy, or by the unknowable itself, as if one <were to say that> the visible <is seen> by the invisible.

One should try, then, to distinguish how many methods there are and in how many ways knowing applies. The starting-point for these questions themselves and the first thing is to determine what knowing is. But this would seem to be rather difficult; for it is impossible to grasp something universal and common in things said in various ways.

ἦ καὶ τοῦτ' (1)
ἄπορον ᾖ οὐ ῥᾴδιόν γε εἰπεῖν, μέχρι πόσου καὶ
τίνων ζητητέον αἰτίας ὁμοίως ἔν τε τοῖς αἰ-
σθητοῖς καὶ νοητοῖς· ἡ γὰρ εἰς τὸ ἄπειρον ὁδὸς
ἐν ἀμφοῖν ἀλλοτρία καὶ ἀναιροῦσα τὸ φρονεῖν.
ἀρχαὶ δὲ τρόπον τινὰ ἄμφω· τάχα δ' ἡ μὲν ἡμῖν
ἡ δ' ἁπλῶς, ἢ τὸ μὲν τέλος ἡ δ' ἡμετέρα τις
25 ἀρχή. μέχρι μὲν οὖν τινὸς δυνάμεθα δι' αἰτίου
θεωρεῖν ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες·
ὅταν δὲ ἐπ' αὐτὰ τὰ ἄκρα καὶ πρῶτα μεταβαίνω-
μεν οὐκέτι δυνάμεθα, εἴτε διὰ τὸ μὴ ἔχειν αἰ-
τίαν εἴτε διὰ τὴν ἡμετέραν ἀσθένειαν ὥσπερ
πρὸς τὰ φωτεινότατα βλέπειν. (τάχα δ' ἐκεῖνο
ἀληθέστερον ὡς αὐτῷ τῷ νῷ τῶν τοιούτων ἡ
θεωρία θιγόντι καὶ οἷον ἀψαμένῳ· διὸ καὶ οὐκ
ἔστιν ἀπάτη περὶ αὐτά.)

26 χαλεπὴ δὲ καὶ εἰς αὐτὸ (16)
τοῦθ' ἡ σύνεσις καὶ ἡ πίστις, ἐπεὶ καὶ ἄλλως μέγα
καὶ πρὸς τὰς καθ' ἕκαστα πραγματείας ἀναγκαῖον
καὶ μάλιστα τὰς μεγίστας, ἐν τίνι ποιητέον τὸν
ὅρον, οἷον περὶ τὰς τῆς φύσεως καὶ περὶ τὰς ἔτι
προτέρας. οἱ γὰρ ἁπάντων ζητοῦντες λόγον ἀναι-
ροῦσιν λόγον, ἅμα δὲ καὶ τὸ εἰδέναι· μᾶλλον δ'
ἀληθέστερον εἰπεῖν ὅτι ζητοῦσιν ὧν οὐκ ἔστιν
οὐδὲ πέφυκεν.

ὅσοι τὸν οὐρανὸν ἀΐδιον ὑπο- (24)
27 λαμβάνουσιν, ἔτι δὲ τὰ κατὰ τὰς φορὰς καὶ τὰ
μεγέθη καὶ τὰ σχήματα καὶ τὰς ἀποστάσεις καὶ
ὅσα ἄλλα ἀστρολογία δείκνυσιν, τούτοις κατάλοι-
πον τά τε πρῶτα κινοῦντα καὶ τὸ τίνος ἕνεκα λέ-
γειν καὶ τίς ἡ φύσις ἑκάστου καὶ ἡ πρὸς ἄλληλα
θέσις καὶ ἡ τοῦ σύμπαντος οὐσία (καὶ ὑποβαίνοντι

VIII.4 Wherefore this too is problematical or at any rate not easy to say, up to which point and of which entities one should seek the cause, in the objects of sense and in the objects of thought alike: for the infinite regress is foreign <to their nature> in both cases and destroys our understanding.
Both of them are starting-points in some way: and perhaps the one for us, the other absolutely, or, on the one hand, the end and the other a starting-point of ours.

Up to some point, then, we are capable to study <things> causally, taking our starting-point from sense-perceptions in each case; but when we proceed to the extreme and primary entities we are no longer capable of doing so, either owing to the fact that they do not have a cause, or through our lack of strength to look, one would say, at the brightest of things.
(But perhaps this is more in accordance with reality, that observation of such things <takes place> by reason itself, which touches and (so to speak) grasps them—which is also why there can be no deception about them.)

VIII.5 Difficult also are insight and certitude with regard to precisely this issue—though, apart from being otherwise important, it is necessary to the particular studies, and above all to the most important ones: <the question> at which point one should draw the line, sc. with regard to the studies of nature and those that are even prior to these. For those seeking an explanation of all things destroy explanation, and at the same time knowing, too; or rather, it is more true to say that they seek an explanation of those things of which there is none, and in virtue of their nature there can be no explanation.

VIII.6 All those who assume the heaven to be eternal—and besides <accept> the facts with regard to the motions, sizes, shapes and distances involved, and all the other things which astronomy brings to light—to these people it remains to state the first things imparting movement, and that for the sake of which, and what the nature of each object is and their relative position, and the being of the whole (and then as one duly descends to the

δὴ πρὸς τὰ ἄλλα καθ' ἕκαστον τῶν εἰδῶν ἢ με-
ρῶν ἄχρι ζῴων καὶ φυτῶν). εἰ οὖν ἀστρολογία 10 a 5
συνεργεῖ μέν, οὐκ ἐν τοῖς πρώτοις δὲ τῆς φύσεως,
ἕτερα τὰ κυριώτατ' ἂν εἴη καὶ πρότερα. καὶ γὰρ
δὴ καὶ ὁ τρόπος, ὥς οἴονταί τινες, οὐ φυσικὸς (ἢ
οὐ πᾶς).

καίτοι τό γε κινεῖσθαι καὶ ἁπλῶς τῆς
φύσεως οἰκεῖον καὶ μάλιστα τοῦ οὐρανοῦ. διὸ καὶ 10 a 10
εἰ ἐνέργεια τῆς οὐσίας ἑκάστου καὶ τὸ καθ' ἕκα-
στον ὅταν ἐνεργῇ καὶ κινεῖται (καθάπερ ἐν τοῖς
ζῴοις καὶ φυτοῖς· εἰ δὲ μή, ὁμώνυμα), δῆλον ὅτι
κἂν ὁ οὐρανὸς ἐν τῇ περιφορᾷ κατὰ τὴν οὐσίαν
εἴη, χωριζόμενος δὲ καὶ ἠρεμῶν ὁμώνυμος· οἷον 10 a 15
28 γὰρ ζωή τις ἡ περιφορὰ τοῦ παντός. ἆρ' οὖν εἴ
γε μηδ' ἐν τοῖς ζῴοις τὴν ζωὴν ἢ ὡδὶ ζητητέον,
οὐδ' ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις τὴν φορὰν
ἢ τρόπον τινὰ ἀφωρισμένον;

συνάπτει δέ πως ἡ
νῦν ἀπορία καὶ πρὸς τὴν ὑπὸ τοῦ ἀκινήτου κί- 10 a 20
νησιν.

IX ὑπὲρ δὲ τοῦ πάνθ' ἕνεκά του καὶ μηδὲν μά-
την ἄλλως ὁ ἀφορισμὸς οὐ ῥᾴδιος (καθάπερ
πλεονάκις λέγεται· πόθεν [δ'] ἄρξασθαι χρὴ καὶ εἰς
ποῖα τελευτᾶν;), καὶ δὴ ἔνια τῷ μὴ δοκεῖν ἔχειν 10 a 25
οὕτως ἀλλὰ τὰ μὲν συμπτωματικῶς τὰ δ' ἀνάγκῃ
τινί, καθάπερ ἔν τε τοῖς οὐρανίοις καὶ ἐν τοῖς
περὶ τὴν γῆν πλείοσιν.

29 τίνος γὰρ ἕνεκα αἱ ἔφο- (28)
δοι καὶ ἀνάρροιαι θαλάττης, ἢ τίνος αἱ προχωρή- 10 b 1
σεις ἢ ἀναξηράνσεις καὶ ὑγρό-
τητες καὶ ὅλως πρὸς ἄλλοτ' ἄλλο μεταβολαὶ καὶ

other things, <to state this> for each species or part, down to animals and plants).

If, then, astronomy does contribute <to our understanding>, but not in the first things of nature, the supreme entities must be different <from its objects>, and prior <to these>. After all the method involved, as some people suppose, is not physical either (or not totally so).

VIII.7 And yet, it is precisely being in movement which without qualification belongs to nature in general and most of all to the heaven. Therefore also, if activity belongs to the essence of each object and if the individual, when it is active, is also in movement (as in the case of animals and plants: otherwise they will be entities bearing this name only), obviously the heaven, too, will be in its rotation by its essence, and when separated from it and at rest, would only be bearing the name: for the rotation of the universe is like a kind of life.

Surely, then, if in the case of animals, too, the life involved requires no explanation except in this or that way, in the case of the heaven and the heavenly bodies the motion involved does not require explanation either, except in some special way?

The present problem somehow connects with the movement effected by the unmoved entity, too.

IX.1 With regard to the issue that all things are for the sake of something and nothing is in vain, the delimitation required is not easy anyway (as is said frequently: where should we begin, and with what sort of things are we expected to end up?), and some things in particular <are difficult> because they do not seem to be such, but some of them coincidentally, others by some necessity —as in the case both of the heavenly bodies and of the majority of things on earth.

For (1) what is it that the incursions and refluxes of the sea are for, or its advances, or droughts setting in and humidities, and generally changes now in this direction, then in that, destructions

φθοραὶ καὶ γενέσεις, ἢ αἱ μὲν ἐν αὐτῇ τῇ γῇ ἀλλοιώσεις καὶ μεταβολαὶ γίνονται πρὸς ἄλλοτ' ἄλλο μεθισταμένων, καὶ ἕτερα δ' οὐκ ὀλίγα παρόμοια τούτοις; ἔτι δ' ἐν αὐτοῖς τοῖς ζῴοις τὰ μὲν ὥσπερ μάταια, καθάπερ τοῖς ἄρρεσιν οἱ μαστοὶ καὶ τοῖς θήλεσιν ἡ πρόεσις (εἴπερ μὴ συμβάλλεται), καὶ πώγωνος δ' ἐνίοις ἢ ὅλως τριχῶν ἔκφυσις ἔν τισιν τόποις. ἔτι δὲ κεράτων μεγέθη, καθάπερ τῶν ἐλάφων (τοῖσδε καὶ λελωβημένων κνήσει τε καὶ παραιωρήσει καὶ ἐπιπροσθήσει τῶν ὀμμάτων)· καὶ ὡς ἔνια δὴ βίᾳ ἢ παρὰ φύσιν, ὥσπερ ὁ ἐρῳδιὸς ὀχεύει καὶ τὸ ἡμερόβιον ζῇ· καὶ ἕτερα οὐκ ὀλίγα
30 λάβοι τις ἂν τοιαῦτα. καὶ τὸ μέγιστον δὴ καὶ μάλιστα δοκοῦν περὶ τὰς τροφὰς καὶ γενέσεις τῶν ζῴων· οὐθενὸς γὰρ ταῦθ' ἕνεκα, ἀλλὰ συμπτώματα καὶ δι' ἑτέρας ἀνάγκας. ἔδει γάρ, εἴπερ τούτων χάριν, ἀεὶ κατὰ ταὐτὰ καὶ ὡσαύτως.

ἔτι δ' ἐν τοῖς φυτοῖς καὶ μᾶλλον τοῖς ἀψύχοις ὡρισμένην τιν' ἔχουσι φύσιν (ὥσπερ δοκοῦσιν) καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν, τίνος ἕνεκα ταῦτα ζητήσειεν ἄν τις. αὐτὸ γὰρ τοῦτο ἄπορον τὸ μὴ ἔχειν λόγον, καὶ ταῦτ' ἐν ἑτέροις μὴ ποιοῦσιν προτέροις καὶ τιμιωτέροις. ἦ καὶ ἔοικεν ὁ λόγος ἔχειν τι πιστόν, ὡς ἄρα τῷ αὐτομάτῳ ταῦτα καὶ τῇ τοῦ ὅλου περιφορᾷ λαμβάνει τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς.

31 εἰ δὲ μή, τοῦ γ' ἕνεκά του καὶ εἰς τὸ ἄριστον ληπτέον τινὰς ὅρους καὶ οὐκ ἐπὶ πάντων ἁπλῶς θετέον· ἐπεὶ καὶ τὰ τοιάδε ἔχει τινὰ διστασμὸν καὶ ἁπλῶς λεγόμενα καὶ καθ' ἕκαστον. ἁπλῶς μὲν ὅτι "τὴν φύσιν ἐν ἅπα-

and generations, by way of which the alterations and changes in the earth itself occur of things shifting now in this direction, now in that—and quite a number of other things much like these, too?

And furthermore (2) in the animals themselves some things are, one would say, idle, such as breasts for males and emission for females (assuming that it does not contribute anything), and also the growth of a beard for some animals, or, in general, the growth of hair in certain places; and furthermore enormous horns, such as those of deer—which are even impaired by them, by abrasion, by being suspended, and by the covering up of their eyes; and the way in which some things, as is well-known, happen by force or against nature: the way in which the heron copulates and the day-fly lives—and one could grasp quite a few other instances of the kind. And obviously the main, and most generally accepted example concerns the <phenomena of> nutrition and generation of animals; for these are not for the sake of anything, but they are concurrences and due to other necessities. For assuming that <they were> for the sake of these <processes>, they ought always to have proceeded in the same manner and have been the same.

And furthermore (3) in plants and even more in inanimate things, which have some definite nature (as they seem to) in shape, in kind, and capacity, one might ask what these phenomena are for. —For the very possibility that they have no explanation is problematic, and especially for those who do not suppose this <to be the case> in other things, prior and more worthy <than these>. This is also also why the account that it is by spontaneity and through the rotation of the whole that these things acquire certain forms or differences from one another seems to have some plausibility.

IX.2 If <this explanation does> not <apply>, we still must assume certain limits to the 'for the sake of something and towards the best', and should not posit this for all cases without qualification; since propositions such as the following leave some room for doubt, both when expressed without qualification and with reference to individual cases; without qualification, that

σιν ὀρέγεσθαι τοῦ ἀρίστου καὶ ἐφ' ὧν ἐνδέχεται
μεταδιδόναι τοῦ ἀεὶ καὶ τοῦ τεταγμένου"· ὡς δ'
αὐτὰ καὶ ἐπὶ τῶν ζῴων ὁμοίως· "ὅπου" γὰρ "οἷόν
τε τὸ βέλτιον, ἐνταῦθα οὐδαμοῦ παραλείπει, οἷον
τὸ ἔμπροσθεν τὴν φάρυγγα τοῦ οἰσοφάγου (τιμιώ- 11 a 10
τερον γάρ), καὶ ἐν τῇ μέσῃ κοιλίᾳ τῆς καρδίας
τὴν κρᾶσιν ἀρίστην, ὅτι τὸ μέσον τιμιώτατον"·
32 ὡσαύτως δὲ καὶ ὅσα κόσμου χάριν. εἰ γὰρ καὶ
ἡ ὄρεξις οὕτως, ἀλλ' ἐκεῖνό γ' ἐμφαίνει διότι πολὺ
τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον τὸ εὖ (μᾶλλον 11 a 15
δὲ πολλῷ πλεῖον)· ὀλίγον γάρ τι τὸ ἔμψυχον,
ἄπειρον δὲ τὸ ἄψυχον, καὶ αὐτῶν τῶν ἐμψύχων
ἀκαριαῖον, καὶ βέλτιον, τὸ εἶναι.

τὸ δ' ὅλον "σπά- (18)
νιόν τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν, πολὺ δὲ πλῆ-
θος εἶναι τὸ κακόν" (οὐκ ἐν ἀοριστίᾳ δὲ μόνον καὶ οἷον 11 a 20
ὕλης εἴδει, καθάπερ τὰ τῆς φύσεως) ἀμαθεστά-
του. εἰκῇ γὰρ οἱ περὶ τῆς ὅλης οὐσίας λέγον-
τες (ὥσπερ Σπεύσιππος σπάνιόν τι τὸ τίμιον
ποιεῖ τὸ περὶ τὴν τοῦ μέσου χώραν, τὰ δ' ἄκρα
καὶ ἑκατέρωθεν). τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν 11 a 25
ὄντα.

33 Πλάτων δὲ καὶ οἱ Πυθαγόρειοι μακρὰν τὴν
ἀπόστασιν, ἐπεὶ μιμεῖσθαι γ' ἐθέλειν ἅπαντα. 11 b 1
καίτοι καθάπερ ἀντίθεσίν τινα ποιοῦσιν τῆς ἀο-
ρίστου δυάδος καὶ τοῦ ἑνὸς (ἐν ᾗ καὶ τὸ ἄπειρον
καὶ τὸ ἄτακτον καὶ πᾶσα ὡς εἰπεῖν ἀμορφία καθ'
αὑτήν), ὅλως οὐχ οἷόν τε ἄνευ ταύτης τὴν τοῦ ὅλου 11 b 5
φύσιν, ἀλλ' οἷον ἰσομοιρεῖν ἢ καὶ ὑπερέχειν τῆς
ἑτέρας· ᾗ καὶ τὰς ἀρχὰς ἐναντίας. διὸ καὶ οὐδὲ
τὸν θεόν, ὅσοι τῷ θεῷ τὴν αἰτίαν ἀνάπτουσιν, δύ-
νασθαι πάντ' εἰς τὸ ἄριστον ἄγειν—ἀλλ' εἴπερ, ἐφ'

"nature strives for the best in all things, and where possible makes things share in the eternal and the orderly"; and the way these things are said similarly with regard to animals; "for where the better is possible, there it never fails; for instance, the fact that the windpipe is in front of the gullet—for it is more worthy; and in the middle ventricle of the heart the mixture is best, because the middle is most worthy". And in the same way also what is for the cosmos' sake. For even if the desire is such, *this* at any rate shows that what does not respond and does not receive the 'well' is a lot (or rather, is the great majority): the animate is something scanty, the inanimate boundless, and of the animate things themselves being is short, as well as better.

But in general, <the proposition that> "the good is something rare and consists in a few things, whereas evil is a great mass"—with this not merely consisting in indeterminateness and (so to speak) in the form of matter, like the things of nature—, betrays a most ignorant person. For those who speak about being as a whole <talk> at random (as Speusippus holds the valuable to be something rare, found in the region of the centre, the other things being extremes and on either side of it). Reality, then, is just good as it is.

Plato and the Pythagoreans <hold> the distance to be a great one, seeing that all things wish to imitate <the good>. Still for them, as they posit something like an opposition between the One and the indefinite dyad (on which rest both the unlimited and the unordered, and, practically speaking, all shapelessness as such), it is altogether impossible that the nature of the whole should exist without the latter; it could only have (so to speak) an equal share or even exceed the other; this is how <they say that> the principles are contrary to each other. This is also why, according to those who ascribe the cause to God, not even God is capable of leading all things towards the best—but if at all, just as far as pos-

ὅσον ἐνδέχεται. τάχα δ' οὐδ' ἂν προέλοιτ', εἴπερ ἀναιρεῖσθαι συμβήσεται τὴν ὅλην οὐσίαν ἐξ ἐναντίων γε καὶ ⟨ἐν⟩ ἐναντίοις οὖσαν.

34 φαίνεται δὲ καὶ ἐν τοῖς πρώτοις ἐπιθεωρούμενα πολλὰ καὶ ὡς ἔτυχεν, οἷον τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολὰς (οὔτε γὰρ τὸ βέλτιον οὔτε τὸ τινὸς χάριν—ἀλλ' εἴπερ, ἀνάγκῃ τινὶ κατακολουθεῖν)· πολλὰ δὲ καὶ ἐν τῷ ἀέρι τοιαῦτα καὶ ἐν ἄλλοις.

μάλιστα δ' ἂν δόξειεν ἔχειν τήν γε τάξιν τῶν μὲν αἰσθητῶν τὰ οὐράνια, τῶν δ' ἄλλων—εἰ μὴ ἄρα καὶ πρότερα τούτων—τὰ μαθηματικὰ (εἰ γὰρ καὶ μὴ πᾶν ἀλλ' ἐν τούτοις πλέον τὸ τεταγμένον)·—πλὴν εἴ τις τοιαύτας λαμβάνοι τὰς μορφὰς οἵας Δημόκριτος ὑποτίθεται τῶν ἀτόμων.

ἀλλὰ δὴ τούτων μὲν πέρι σκεπτέον. ὃ δ' ἐξ ἀρχῆς ἐλέχθη, πειρατέον τινὰ λαμβάνειν ὅρον, καὶ ἐν τῇ φύσει καὶ ἐν τῇ τοῦ σύμπαντος οὐσίᾳ καὶ τοῦ ἕνεκά του καὶ τῆς εἰς τὸ βέλτιον ὁρμῆς. αὕτη γὰρ ἀρχὴ τῆς τοῦ σύμπαντος θεωρίας, ἐν τίσιν τὰ ὄντα καὶ πῶς ἔχει πρὸς ἄλληλα.

sible. But perhaps he would not even choose to do so, if indeed the result will be that being as a whole, which is out of contraries and consists in contraries, is destroyed.

IX.3 Even in the first bodies on further observation many things appear to be at random indeed, such as the phenomena mentioned in connection with the changes of the earth (for they appear to be neither 'the better' nor 'that for the sake of something', but if anything, to follow by some necessity); and many things in the air as well as in the other regions are like this.

As far as order is concerned at least, among the objects of sense the heavenly bodies might seem to have most of it, and among the other things—that is, if there are no entities even prior to these—the mathematical objects (for even if not everything <is ordered>, still in these things the ordered predominates);—unless one should assume the shapes to be such as Democritus supposes those of the atoms to be.

IX.4 But these things should be inquired into. As has been said at the beginning: one should try to grasp some limit, both in nature and in the being of the whole, both of the <explanation of things as being> 'for the sake of something' and of the impulse towards the better. For this is the starting-point of the study of the whole, in what things reality consists and how they relate to one another.

COMMENTARY

CHAPTER ONE

I.1 (4 a 2-9): *How should one define the study of the first things? This requires a delimitation of it from the study of nature. That such a delimitation can be achieved is suggested by the contrasting characteristics ascribed to these studies and to their objects: the things of nature are more varied, less orderly and subject to all kinds of change, the intelligible is characterized by order and stabilty. The study of the principles is in general more highly valued.*

4 a 2-3 πῶς ... θεωρίαν;

The treatise begins with the question of how to define the study of the 'first things'. This turns out to involve[1] a demarcation between the study of these entities and its rival study, the study of nature—the idea apparently being that together the two of them cover the cosmos in its entirety (cp. 12 a 1 τῆς τοῦ σύμπαντος θεωρίας, with note *ad loc.*).

For the idea that different studies may be distinguished which correspond to the different kinds of entities, compare ἀρχὴ καὶ μέγιστον ὁ οἰκεῖος τρόπος, 9 a 11-2 (with note *ad loc.*), and *HP* I.1.4 τὴν οἰκείαν ... θεωρίαν.[2]

In the present use, then, of **ἀφορίσαι** the concrete basic use of ὅρος ("boundary") is obviously relevant: "mark off", "delimit". The drawing of boundaries involves a selection, i.e. a decision as to what to include and what to exclude.[3] In this sense it is used for an extensional definition, delimiting (with the help of binary divisions) the group of objects to which a term applies:

HP I.1.1 οὐχ ἱκανῶς ἀφώρισται τὰ ποῖα δεῖ μέρη καὶ μὴ μέρη καλεῖν, ἀλλ' ἔχει τινὰ ἀπορίαν.

I.3.5 διὰ δὴ ταῦτα ὥσπερ λέγομεν οὐκ ἀκριβολογητέον τῷ ὅρῳ ἀλλὰ τῷ τύπῳ ληπτέον τοὺς ἀφορισμούς· ἐπεὶ καὶ τὰς διαιρέσεις ὁμοίως, οἷον ἡμέρων ἀγρίων, καρποφόρων ἀκάρπων, ἀνθοφόρων ἀνανθῶν, ἀειφύλλων φυλλοβόλων.

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[1] γὰρ δή, 4 a 3.

[2] See also Regenbogen 1398.

[3] See e.g. Arist. *Met.* 1060 b 27 εἰ δ' ἔστι τι, τὸ εἶδος ἂν εἴη καὶ ἡ μορφή· τοῦτ' οὖν ἐπὶ τίνων ἔστι καὶ ἐπὶ τίνων οὔ, χαλεπὸν ἀφορίσαι ("But if there *is* something [sc. apart from the compound thing], it must be the form or shape. It is hard to determine in which cases this exists apart and in which it does not", *RevOT*).

The possibility of delimitation of course presupposes that there is some difference:

> *Sens.* 25 Ἀλκμαίων μὲν πρῶτον ἀφορίζει τὴν πρὸς τὰ ζῷα διαφοράν (sc. of human beings),

which in a technical sense figures in Aristotelian definition as the *differentia specifica* distinguishing a species from other species of the same genus.[1] With the naming of the specific characteristics of the entity itself (Arist. *Cat.* 3 b 20 τὸ δὲ εἶδος καὶ τὸ γένος περὶ οὐσίαν τὸ ποῖον ἀφορίζει) the object from which it is distinguished may recede into the background (in which case the use of ἀφορίζειν, ἀφορισμός approximates that of ὁρίζειν, ὁρισμός signifying a qualitative definition): e.g. τὸ ἀφορίσαι τί τὸ ἐπίστασθαι, 9 a 25-6; ἐν ... τῷ ἀφορισμῷ τῆς κινήσεως, 153B.11 FHS&G.

The use of the aorist infinitive of the terminative verb seems to indicate that the question is how the delimitation can be accomplished successfully.[2] A similar tenor may be involved in the use of **δεῖ**, which indicates that the activity expressed by the infinitive involves a task set to someone (the perpetration of which might prove to be impossible).[3]

καὶ ποίοις ("and by what sort of characteristics")[4] here explicitly adds the intensional aspect of the required ἀφορισμός—and in fact in what follows various characteristics of both studies, and of their objects, will be mentioned. ποίοις (as opposed to a potential τίσιν) seems to bring the question to a more general (or generic) level; in any case, among the characteristics brought forward in the following 'physical' and 'normative' ones may be distinguished. Compare

> *CP* I.8.4 εὐαξῆ μὲν οὖν καὶ δυσαυξῆ τοῖς τοιούτοις ἀφοριστέον (in what precedes the author has listed characteristics affecting differences in speed of growth, with regard to the mode of propagation or the nature of the tree).

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[1] See e.g. Arist. *Top.* 139 a 28-31 δεῖ ... τὸν ὁριζόμενον εἰς τὸ γένος θέντα τὰς διαφορὰς προσάπτειν· μάλιστα γὰρ τῶν ἐν τῷ ὁρισμῷ τὸ γένος δοκεῖ τὴν τοῦ ὁριζομένου οὐσίαν σημαίνειν, and for the connectedness of γένος and διαφορά, *ibid.* 101 b 18-9 καὶ γὰρ τὴν διαφορὰν ὡς οὖσαν γενικὴν ὁμοῦ τῷ γένει τακτέον (sc. as the subject of a πρότασις or πρόβλημα); also 102 a 7-9 καὶ γὰρ περὶ τοὺς ὁρισμοὺς πότερον ταὐτὸν ἢ ἕτερον ἡ πλείστη γίνεται διατριβή ("for argument about definitions is mostly concerned with questions of sameness and difference", *RevOT*).

[2] Cp. Sicking (1991) 21.

[3] Possibly in contrast to χρή—which might seem to connote that there is an intrinsic obligation—or, in any case, an obligation recognized by the author—to perpetrate the activity expressed by the infinitive; see πῶς ... χρὴ ... ὑποθέσθαι, 6 b 23-4. I owe this suggestion to Dr J.M. van Ophuijsen.

[4] *Contra* L-M: "Comment ... et par quels types [d'objets]" (tr.).

I.10.7 διαιρετέον αὐτὸ τοῦτο, πρῶτον ἴσως εἰπόντας ποῖα θερμὰ καὶ ποῖα ψυχρὰ καὶ τοῖς ποίοις ληπτέον.

At the same time, in addition to this intensional aspect, an element of contrast between the two provinces is clearly intended.

τὴν ὑπὲρ τῶν πρώτων θεωρίαν: the use of the preposition exemplifies the increase in the use of **ὑπέρ** τινος[1] at the expense of περί τινος in post-classical Greek.[2] Compare

CP V.4.7 ὑπὲρ δὲ τῶν ἐν αὐτοῖς φυτοῖς ἐκ τῶν εἰρημένων πειρατέον μετιέναι καὶ θεωρεῖν. (also II.19.6);

contrast *CP* VI.20.4 περὶ μὲν οὖν ὀσμῶν καὶ χυλῶν τῶν ἐν τοῖς φυτοῖς ἐκ τούτων θεωρητέον, III.1.1 ἡ περὶ τῶν φυτῶν θεωρία; also Arist. *Phys.* 200 b 24 ὑστέρα γὰρ ἡ περὶ τῶν ἰδίων θεωρία τῆς περὶ τῶν κοινῶν ἐστιν.
The choice of ὑπέρ may in some contexts be motivated by the wish to avoid hiatus. On this motive and on rhythmical motives which may influence the distribution of the two prepositions, see EINARSON (1976) xliii-vi.

θεωρία[3] may also be followed by a genitive without any preposition: see ἡ ... τῆς φύσεως (sc. θεωρία) 4 a 3; also 12 a 1 τῆς τοῦ σύμπαντος θεωρίας; *CP* VI.4.2 τὴν τῶν ἄλλων θεωρίαν.
This use with a genitive illustrates the, perhaps primary,[4] use of θεωρεῖν as denoting an act of immediate perception: "view", "be a spectator", as in Hdt. I.30.1 τῆς θεωρίης ἐκδημήσας ... εἵνεκεν; 30.2 ὡς φιλοσοφέων γῆν πολλὴν θεωρίας εἵνεκεν ἐπελήλυθας (cp. IV.76.2). Compare also

Democr. B 195 DK <"Götter, Frauen? sind">[5] εἴδωλα ἐσθῆτι καὶ κόσμῳ διαπρεπέα πρὸς θεωρίην, ἀλλὰ καρδίης κενεά.

In the *Char.* the verb is frequently found in the sense of being a spectator in the theatre: see e.g. VI.4, IX.5, XI.3. But also

HP III.1.2 σημεῖον δὲ λέγουσιν οὐ μόνον ὅτι φύεται πολλὰ τῶν ῥιζῶν ἀπηρτημένα καθ' οὓς ἂν ᾖ τόπους, ἀλλὰ καὶ τὰ συμβαίνοντα θεωροῦντες οἷον ἐν Φενεῷ τῆς Ἀρκαδίας ὡς ἐξερράγη τὸ συναθροισθὲν ὕδωρ ἐν τῷ πεδίῳ φραχ-

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[1] See also 10 a 22.
[2] See SCHW. II.500; THUMB (1901) 57; STEVENS (1936) 208-9; JAEGER (1938) 22. Also BONITZ 790 b 25-7: in *Rhet. ad Alex.* ὑπέρ τινος is more frequent than περί τινος; in *MM* περί τινος is hardly ever used.
[3] Some observations and references in what follows I owe to Professor S.L. Radt.
[4] See KOLLER (1958), who argues that originally θεωρία and θεωρεῖν are always connected with travelling.
[5] DK *ad loc.*

θέντων τῶν βερέθρων ("l'observation des phénomènes", tr. AMIGUES); see also *Vent.* 33.

Apparently the act of perception is always deliberate and directed towards a particular object or purpose; accordingly, θεωρεῖν/θεωρία is commonly used for the deliberate and what may be called scientific observation of nature: e.g.

HP IV.6.9 ταῦτα ("these plants") μὲν οὖν πρόσγεια καὶ ῥᾴδια θεωρηθῆναι (cp. IV.7.5, 7.8);
CLXXI.2 W.[1] (fish remaining on dry land) ὅτι δ' οὐ πόδας ἔχουσιν ἀλλ' ἐπὶ τῶν πτερυγίων βαδίζουσι τεθεώρηται ("it has been observed that...")· ἐλάμβανον γὰρ πολλοὺς οἱ διώκοντες· ...
584A.269 FHS&G τῆς δὲ νυκτὸς τῶν ἄστρων ποιοῦνται τὴν θεωρίαν (sc. Ἰουδαῖοι), βλέποντες εἰς αὐτὰ καὶ διὰ τῶν εὐχῶν θεοκλυτοῦντες.

As such it often involves the observation of differences :

HP I.14.5 ἀλλὰ δὴ τὰς μὲν τῶν μορίων διαφορὰς καὶ τῶν ἄλλων οὐσιῶν ἐκ τούτων πειρατέον θεωρεῖν. (also I.14.2, 14.4 (συνθεωρεῖν); *CP* II.4.12);
IV.1.1 αἱ μὲν οὖν διαφοραὶ τῶν ὁμογενῶν τεθεώρηνται πρότερον.
VII.15.3 χρὴ δέ, ὥσπερ πολλάκις εἴρηται, τὰς ἰδιότητας θεωρεῖν καὶ τὰς διαφορὰς πρὸς τὰ ἄλλα (sc. plants).

This use of the term for the observation of differences shades into a use for more abstract questions, as may be observed in the following sequence:

8 b 11 ἡ γὰρ αἴσθησις καὶ τὰς διαφορὰς θεωρεῖ καὶ τὰς αἰτίας ζητεῖ (see note *ad loc.*)
Sud. 14 ἀλλὰ περὶ μὲν τούτων καὶ πόσα καὶ ποῖα καὶ τί διαφέροντα καθ' αὐτὰ χρὴ θεωρεῖν.
Vent. 1 ἡ τῶν ἀνέμων φύσις, ἐκ τίνων μὲν καὶ πῶς καὶ διὰ τίνας αἰτίας γίνεται, τεθεώρηται πρότερον.
also *Lap.* 22; *HP* I.12.4; *CP* I.4.6 (αἰτίας); *Od.* 35 (φύσεις καὶ δυνάμεις); *CP* I.16.11; I.21.14.

The word acquires a more purely intellectual connotation as the act of the 'mind's eye': "regard", "contemplate".[2]

Democr. B 191, II.184.13 DK ἐπὶ τοῖς δυνάτοις οὖν δεῖ ἔχειν τὴν γνώμην καὶ τοῖς παρεοῦσιν ἀρκέεσθαι τῶν μὲν ζηλουμένων καὶ θαυμαζομένων ὀλίγην μνήμην ἔχοντα καὶ τῇ διανοίᾳ μὴ προσεδρεύοντα, τῶν δὲ ταλαιπωρεόντων τοὺς βίους *θεωρέειν*, ἐννοούμενον ἃ πάσχουσι κάρτα ...

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[1] See now SHARPLES (1992).
[2] Cp. the development in the use of νοῦς and νοεῖν traced by VON FRITZ (1943), (1945), and (1946).
[3] Cp. expressions like τὸ τῆς ψυχῆς ὄμμα, Plato *Resp.* 533 D 2; *Soph.* 254 A 10; ἡ ... τῆς διανοίας ὄψις *Symp.* 219 A 2-3.

As such the term is apt to refer to the activity of the Platonic soul, conceived as a superior kind of perception.[3] The immediate nature of the act of cognition is often stressed by the use of verbs like ὁρᾶν and θεᾶσθαι (to which θεωρεῖν is transparently related) in the immediate context: e.g.

Plato *Phaedr.* 247 D 4 ἅτ' οὖν θεοῦ διάνοια ... ἰδοῦσα διὰ χρόνου τὸ ὂν ἀγαπᾷ τε καὶ θεωροῦσα τἀληθῆ τρέφεται καὶ εὐπαθεῖ (cp. 247 C 1).[1]

In Th.' *Met.*, too, θεωρία is used in a context where noetic perception is described in the vocabulary of sense perception, with the explicit suggestion that the 'theoretical' or non-sensory information involved is *as reliable as* sense perception: τάχα δ' ἐκεῖνο ἀληθέστερον ὡς αὐτῷ τῷ νῷ τῶν τοιούτων ἡ θεωρία θιγόντι καὶ οἷον ἁψαμένῳ· διὸ καὶ οὐκ ἔστιν ἀπάτη περὶ αὐτά (9 b 13-6; see note *ad loc.*). Nonetheless, as an activity of a not strictly sensory nature, θεωρεῖν may just as well be *contrasted* with ὁρᾶν: e.g.

Arist. *Met.* 1050 a 35 ὅσων δὲ μὴ ἔστιν ἄλλο τι ἔργον παρὰ τὴν ἐνέργειαν, ἐν αὐτοῖς ὑπάρχει ἡ ἐνέργεια (οἷον ἡ ὅρασις ἐν τῷ ὁρῶντι καὶ ἡ θεωρία ἐν τῷ θεωροῦντι καὶ ἡ ζωὴ ἐν τῇ ψυχῇ, ...).

The term seems to be used in the sense of "theory", "science" (indicating a cognitive enterprise) from Aristotle onwards:

Arist. *Pol.* 1324 a 20 ἐπεὶ δὲ τῆς πολιτικῆς διανοίας καὶ θεωρίας τοῦτ' ἐστὶν ἔργον, ἀλλ' οὐ τὸ περὶ ἕκαστον αἱρετόν, ἡμεῖς δὲ ταύτην προῃρήμεθα νῦν τὴν σκέψιν, ἐκεῖνο μὲν πάρεργον ἂν εἴη, τοῦτο δὲ ἔργον τῆς μεθόδου ταύτης.

Compare *DA* 412 a 11, where two forms of ἐντελέχεια, viz. τὸ θεωρεῖν and ἡ ἐπιστήμη are said to be related as ἐνέργεια to ἕξις: both denote "science", but θεωρεῖν indicates the actual performance, ἐπιστήμη the disposition to this activity.

It may even refer to the product of this activity: Arist. *HA* 539 a 20 ὥσπερ εἴρηται ἐν τῇ θεωρίᾳ τῇ περὶ φυτῶν "as is mentioned in my treatise on *Plants*", *RevOT.*

This specialized use is often marked by a following περί or, as here, ὑπέρ + gen.; e.g.

Arist. *Met.* 1073 b 5-6 (ἡ ἀστρολογία) περὶ οὐσίας αἰσθητῆς μὲν ἀϊδίου δὲ ποιεῖται τὴν θεωρίαν, αἱ δ' ἄλλαι περὶ οὐδεμιᾶς οὐσίας, οἷον ἥ τε περὶ τοὺς ἀριθμοὺς καὶ τὴν γεωμετρίαν.

Also Arist. *Met.* α 993 a 30 ἡ περὶ τῆς ἀληθείας θεωρία.

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[1] One may compare Arist. *Protr.* B 48 D. (quoted below), where the philosopher is described as αὐτῶν (i.e. τῶν ἀκριβῶν) ... θεατής—τὰ ἀκριβῆ being used as an equivalent of τὰ πρῶτα.

τῶν πρώτων (sc. ὄντων): "the first things". The hierarchy implied concerns being (or, with some paradox as far as the present context is concerned, 'nature' in the widest sense of the term: τὰ πρῶτα τῆς φύσεως, see 10 a 6) as a whole. It is made explicit in

> Arist. *Protr.* B 48 D. καὶ τῶν μὲν ἄλλων τεχνῶν τά τ' ὄργανα καὶ τοὺς λογισμοὺς τοὺς ἀκριβεστάτους οὐκ ἀπ' αὐτῶν τῶν πρώτων λαβόντες σχεδὸν ἴσασιν, ἀλλ' ἀπὸ τῶν δευτέρων καὶ τρίτων καὶ πολλοστῶν, τοὺς δὲ λόγους ἐξ ἐμπειρίας λαμβάνουσι· τῷ δὲ φιλοσόφῳ μόνῳ τῶν ἄλλων ἀπ' αὐτῶν τῶν ἀκριβῶν ἡ μίμησίς ἐστιν· αὐτῶν γάρ ἐστι θεατής, ἀλλ' οὐ μιμημάτων.

The earliest instance of the more technical use[1] seems to be Plato *Ep.* VII 344 D 4-5: (εἴτ' ...) Διονύσιος ἔγραψέν τι τῶν περὶ φύσεως ἄκρων καὶ πρώτων—unless one would consider as an earlier instance Arist. *Protr.* B 35 D. quoted *ad* ὡρισμένη 4 a 6, p. 79 below. See also Arist. *Met.* 982 b 2 μάλιστα δ' ἐπιστητὰ τὰ πρῶτα καὶ τὰ αἴτια; *GC* 335 a 29 ἐν τοῖς ἀϊδίοις τε καὶ πρώτοις opp. γενητὰ καὶ φθαρτά (335 a 24).

In our text the term is fairly common: 4 a 5, 6 b 11; 9 a 12 (τὰ πρῶτα καὶ νοητά); 9 b 10 (τὰ ἄκρα καὶ πρῶτα, as in the quotation from Plato *Ep.* VII above); 10 a 6 (ἐν τοῖς πρώτοις ... τῆς φύσεως; see note *ad loc.*); but also 11 b 13 ἐν τοῖς πρώτοις "in the first bodies": see note *ad loc.*

The non-technical expression with the prepositional adjunct (instead of, e.g., ἡ πρώτη ἐπιστήμη/φιλοσοφία) may be significant in sofar as it directs our attention towards the *object* of the θεωρία concerned, given that in the following (1) the identity of the first things is under discussion, and, more fundamentally, (2) it will appear to be debatable whether there *is* any clear-cut boundary between the "first things" and the physical objects at all. See VIII.6, IX.3 and IX.4, with commentary *ad locc.*

4 a 3-5 ἡ γὰρ δὴ ... παντοίας

With **γάρ** the reason for asking this question is placed in conceptions, familiar to the audience (**δή**), with regard to the contrast between ἡ ὑπὲρ τῶν πρώτων θεωρία and its counterpart, ἡ τῆς φύσεως (θεωρία).

φύσις here refers to the domain of becoming (in accordance with its formation from the root φυ-) and movement; the opposition to τὰ πρῶτα (and, in 4

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[1] Emp. B 38.1 DK (εἰ δ' ἄγε τοι λέξω πρῶθ' † ἥλιον ἀρχήν †) is too corrupt to count as an instance of πρῶτα: "Wohlan, so will ich Dir verkünden (die ersten und gleichursprünglichen *Elemente*?)", DK; but cp. GUTHRIE II.185 n.: "the line as the received text of Clement has it (...) is nonsense".

a 11, τὰ τῆς φύσεως opp. τὰ νοητά) betrays a position not unaffected by Platonic dualism: cf. τὰ πρῶτα καὶ νοητά opp. τὰ κινητὰ καὶ ὑπὸ τὴν φύσιν 9 a 12-3. Also καὶ ἐν τῇ φύσει καὶ ἐν τῇ τοῦ σύμπαντος οὐσίᾳ (11 b 25-6), the manner of phrasing betraying a somewhat different valuation of the relationship between the ingredients of being (see also Introduction, pp. 11-2).

The term **πολύχους** seems to be primarily a biological one: "productive", "fruitful":[1]

> *HP* VIII.3.4 ὅλως δὲ πολυκαρπότερα καὶ πολυχούστερα τὰ χεδροπὰ (leguminous plants); cp. *CP* IV.8.1
> VII.3.4 ἅπαντα δὲ πολύχοα καὶ πολυσπέρματα, πολυκαρπότατον δὲ τὸ ὤκιμον (basil).
> *CP* II.12.1, III.9.1; of animals: Arist. *GA* 726 a 10 καὶ πολύχοά ἐστι καὶ πολύσπερμα; *HA* 629 a 35-b 1); with its opposite ὀλιγόχους: *HP* VIII.4.3, *CP* IV.11.3.

With other objects more generally: "multiform", "diverse"; see e.g.

> Arist. *PA* 656 a 5 τὰ δὲ πρὸς τῷ ζῆν αἴσθησιν ἔχοντα (sc. ζῷα) πολυμορφοτέραν ἔχει τὴν ἰδέαν, καὶ τούτων ἕτερα πρὸ ἑτέρων μᾶλλον, καὶ πολυχουστέραν ὅσων μὴ μόνον τοῦ ζῆν ἀλλὰ καὶ τοῦ εὖ ζῆν ἡ φύσις μετείληφεν.
> *Od.* 37 (ἡ τοῦ ἔτους κατάστασις) πολυχουστέρας ὁτὲ δ' ἀσθενεστέρας τὰς δυνάμεις ⟨ποιεῖ⟩, sc. of ἀρώματα;

the noun in the corresponding sense, e.g.

> *HP* I.14.5 ἔστι δὲ τῶν μὲν ῥᾷον λαβεῖν καὶ διαριθμῆσαι τὰ εἴδη, τῶν δὲ χαλεπώτερον διὰ τὴν πολυχοΐαν.

And so "various", "diverse", as here—where the reference is apparently to different kinds of θεωρία corresponding to the different domains of nature; for an obvious example of this diversity cp. *HP* I.1.4, where the study of plants is referred to as ἡ οἰκεία θεωρία, in contrast to the study of animals. See also 9 a 11 ff. below. Compare

> *HP* I.1.10 ὅλως δὲ πολύχουν τὸ φυτὸν καὶ ποικίλον καὶ χαλεπὸν εἰπεῖν καθόλου· σημεῖον δὲ τὸ μηδὲν εἶναι κοινὸν λαβεῖν ὃ πᾶσιν ὑπάρχει, καθάπερ τοῖς ζῴοις στόμα καὶ κοιλία, and similarly
> I.2.3 ἔχει δὲ ἴσως καὶ ἄλλας διαφορὰς καὶ ταῦτα καὶ ὅλως τὸ τῶν φυτῶν γένος· πολύχουν γὰρ ὥσπερ εἰρήκαμεν.

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[1] < χέω, "to pour". Cp. Einarson/Link *ad CP* IV.8.1: "The word πολύχους ("prolific," literally "with many *choes*["]; a *chous* contained about six pints) implies seed-crops; both the seed sown and the crop harvested consisted of "seeds" which could be measured and compared."

ἀτακτοτέρα: "less orderly". The purport is presumably that the constituent parts of this study, besides showing a greater variety, show a less fixed and clear-cut relation towards each other.

This comparative lack of order is explained by **μεταβολὰς ἔχουσα παντοίας**: the study of nature "involves all kinds of change"—which shows that its characteristics mirror, or even, in a way, coincide with,[1] those of its subject-matter.[2] This view is not implausible within a conception of science in which scientific progress is made by recognizing differences and similarities,[3] a procedure which is supposed to yield a classification, or at least a mapping of reality.

Such a notion of a correspondence in reality is not recognized by R-F *ad loc.*: "there is probably some confusion between natural science and its subject-matter" (R-F accordingly translate ἔχουσα by "comprising as it does ..."—which, of course, is quite possible in itself). For the present use of ἔχειν one may compare, however, Thuc. I.2.3 μάλιστα δὲ τῆς γῆς ἡ ἀρίστη αἰεὶ τὰς μεταβολὰς τῶν οἰκητόρων εἶχεν ("fast s. v. a. ἔπασχεν", CLASSEN-STEUP *ad loc.*).

The idea of a correspondence between a realm of knowledge and the subject-matter it is concerned with might be considered an Eleatic heritage; see e.g. ταὐτὸν δ' ἐστὶ νοεῖν τε καὶ οὕνεκεν ἔστι νόημα. / οὐ γὰρ ἄνευ τοῦ ἐόντος, ἐν ᾧ πεφατισμένον ἐστιν, / εὑρήσεις τὸ νοεῖν, Parm. B 8.34-6 DK). Compare

Plato *Resp.* 511 D 6 – E 4 καί μοι ἐπὶ τοῖς τέτταρσι τμήμασι (sc. images, visible things, mathematical objects, forms) τέτταρα ταῦτα παθήματα ἐν τῇ ψυχῇ γιγνόμενα λαβέ, νόησιν μὲν ἐπὶ τῷ ἀνωτάτω, διάνοιαν δὲ ἐπὶ τῷ δευτέρῳ, τῷ τρίτῳ δὲ πίστιν ἀπόδος καὶ τῷ τελευταίῳ εἰκασίαν, καὶ τάξον αὐτὰ ἀνὰ λόγον, ὥσπερ ἐφ' οἷς ἐστιν ἀληθείας μετέχει, οὕτω ταῦτα σαφηνείας ἡγησάμενος μετέχειν.

Arist. *DA* 430 a 3-5 ἐπὶ μὲν γὰρ τῶν ἄνευ ὕλης τὸ αὐτό ἐστι τὸ νοοῦν καὶ τὸ νοούμενον· ἡ γὰρ ἐπιστήμη ἡ θεωρητικὴ καὶ τὸ οὕτως ἐπιστητὸν τὸ αὐτό ἐστιν. (... 430 a 19-20) τὸ δ' αὐτό ἐστιν ἡ κατ' ἐνέργειαν ἐπιστήμη τῷ πράγματι; cp.

431 b 21-5 ἢ γὰρ αἰσθητὰ τὰ ὄντα ἢ νοητά, ἔστι δ' ἡ ἐπιστήμη μὲν τὰ ἐπιστητά πως, ἡ δ' αἴσθησις τὰ αἰσθητά· πῶς δὲ τοῦτο, δεῖ ζητεῖν. τέμνεται οὖν ἡ ἐπιστήμη καὶ ἡ αἴσθησις εἰς τὰ πράγματα, κ.τ.λ.

Met. 1075 a 3-5 οὐχ ἑτέρου οὖν ὄντος τοῦ νοουμένου καὶ τοῦ νοῦ, ὅσα μὴ ὕλην ἔχει, τὸ αὐτὸ ἔσται, καὶ ἡ νόησις τῷ νοουμένῳ μία.

PA 641 a 34 – b 4 εἰ γὰρ περὶ πάσης (sc. ψυχῆς (ἐστιν) ἡ φυσική), οὐδε-

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[1] See Arist. *DA* 431 b 1-5 below; see also Introduction, p. 13 n. 2.

[2] "L'unité ou la diversité de la science est déterminée par l'unité ou la diversité de son objet", TRICOT *ad loc.*; see also L-M *ad loc.*

[3] See esp. VIII.1 and 2, 8 b 10 – 9 a 9.

μία λείπεται παρὰ τὴν φυσικὴν ἐπιστήμην φιλοσοφία. ὁ γὰρ νοῦς τῶν νοητῶν. ὥστε περὶ πάντων ἡ φυσικὴ γνῶσις ἂν εἴη· τῆς γὰρ αὐτῆς περὶ νοῦ καὶ νοητοῦ θεωρῆσαι, εἴπερ πρὸς ἄλληλα, καὶ ἡ αὐτὴ θεωρία τῶν πρὸς ἄλληλα πάντων, καθάπερ καὶ περὶ αἰσθήσεως καὶ τῶν αἰσθητῶν.

See also 319 FHS&G (= Prisc. *Metaphr.* 2.19-20)—which seems to indicate also that the borderline between the objects of thought and the objects of perception is not for Th. without problems:

ἐπὶ δὲ τούτοις ἐκθέμενος (sc. ὁ Θεόφραστος) τὰ Ἀριστοτέλους, ἐν οἷς ἐκεῖνος τὰ χωριστὰ καὶ ἄυλα εἰς ταὐτὸν ἄγει τῷ νῷ, ἐν δὲ τοῖς ἐνύλοις δυνάμει ἕκαστον εἶναι τῶν νοητῶν καὶ τούτοις μὴ ἐνυπάρχειν τὸν νοῦν, ἐπιδιαρθροῖ τε τὰ εἰρημένα καὶ ἐπαπορεῖ τινα. ... τοῖς μὲν οὖν ἐνύλοις οὐχ ὑπάρχει ὁ νοῦς, ἐκείνῳ δὲ τὸ νοητὸν ὑπάρξει. τοῦτο δὲ διαρθρῶν ὁ Θεόφραστος ἐπάγει· "ἀλλ' ὅταν γένηται καὶ νοηθῇ δηλονότι ταῦτα ἕξει, τὰ δὲ νοητὰ ἀεί, *εἴπερ ἡ ἐπιστήμη ἡ θεωρητικὴ ταὐτὸ τοῖς πράγμασιν*", αὕτη δὲ ἡ κατ' ἐνέργειαν δηλονότι· κυριωτάτη γάρ. "τῷ νῷ", φησί, "τὰ μὲν νοητά", τουτέστι τὰ ἄυλα, "ἀεὶ ὑπάρχει", ἐπειδὴ κατ' οὐσίαν αὐτοῖς σύνεστι καὶ ἔστιν ὅπερ τὰ νοητά· "τὰ δὲ ἔνυλα, ὅταν νοηθῇ, καὶ αὐτὰ τῷ νῷ ὑπάρξει."

Also Iambl. *Comm. Math.* XXVII, 88.20 F., quoted *ad* πρὸς ἄλληλα, 4 a 10 (p. 89 n. 4).

ὥς γε δή τινές φασιν: while we cannot trace this characterization of the study of physics to its source, the opinion is quite consistent with Aristotelian thought; see e.g.

Arist. *Meteor.* 338 a 25 – b 21 λοιπὸν δ' ἐστὶ μέρος τῆς μεθόδου ταύτης (i.e., 'natural philosophy') ἔτι θεωρητέον, ὃ πάντες οἱ πρότεροι μετεωρολογίαν ἐκάλουν· ταῦτα δ' ἐστὶν ὅσα συμβαίνει κατὰ φύσιν μέν, ἀτακτοτέραν μέντοι τῆς τοῦ πρώτου στοιχείου τῶν σωμάτων ...
(See also *Protr.* B 33 D., quoted in the next note.)

As this passage from the *Meteorologica* shows, the Aristotelian idea that φύσις by itself implies some sort of order does not preclude different *degrees* of order; for the first idea see e.g.

Arist. *Phys.* 252 a 11-2 ἀλλὰ μὴν οὐδέν γε ἄτακτον τῶν φύσει καὶ κατὰ φύσιν· ἡ γὰρ φύσις αἰτία πᾶσι τάξεως.

Cael. 301 a 4-11 ἔτι τὸ ἀτάκτως οὐθέν ἐστιν ἕτερον ἢ τὸ παρὰ φύσιν· ἡ γὰρ τάξις ἡ οἰκεία τῶν αἰσθητῶν φύσις ἐστίν. ἀλλὰ μὴν καὶ τοῦτο ἄτοπον καὶ ἀδύνατον, τὸ ἄπειρον ἄτακτον ἔχειν κίνησιν· ἔστι γὰρ φύσις ἐκείνη τῶν πραγμάτων οἵαν ἔχει τὰ πλείω καὶ τὸν πλείω χρόνον· συμβαίνει οὖν αὐτοῖς (sc. τοῖς ἄπειρα ἐν ἀπείρῳ τὰ κινούμενα ποιοῦσιν) τοὐναντίον τὴν μὲν ἀταξίαν εἶναι κατὰ φύσιν, τὴν δὲ τάξιν καὶ τὸν κόσμον παρὰ φύσιν· καίτοι οὐδὲν ὡς ἔτυχε γίγνεται τῶν κατὰ φύσιν.

See also Arist. Fr. 17 Rose (1476 a 44 – b 2) quoted *ad* ἐν ὀλίγοις ... καὶ περιττοῖς 4 b 9-10, p. 121 below.

As often, **δή** intimates that the statement (τινές φασιν) is equally obvious to the audience as it is to the speaker; **γε** indicates that the author does not take responsibility for this statement: compare e.g., without δή,

> *HP* IV.13.4 ἐπεί, ἐὰν ἀληθὲς ᾖ, ὥς γέ τινές φασι, τὰς ἀμπέλους μακροβιωτάτας εἶναι τῷ μὴ φύειν ἑτέρας ἀλλ' ἐξ αὐτῶν ἀεὶ συναναπληροῦσθαι, γελοῖον ἂν ἴσως δοκοίη τοιαύτη σύγκρισις ἐὰν ⟨μὴ⟩ μένῃ τὸ στέλεχος· αὕτη γὰρ οἷον ὑπόθεσις καὶ φύσις δένδρων.
>
> IV.15.4 καίτοι φασί γέ τινες, ἐὰν (sc. one strips the bark of a tree) ὁποσονοῦν, συμφθείρεσθαι πάντως· ἀλλ' ἐπὶ τῶν ἀσθενεστέρων τοῦτ' εἰκός.

and, stressing the limited number of adherents to the opinion quoted,

> *Lap.* 26 καὶ ἔνιοί γε δὴ καὶ ὑπολαμβάνουσι τὴν αὐτὴν φύσιν εἶναι (sc. αὐτάς, i.e. chrysocolla and smaragdus)· καὶ γὰρ τὴν χρόαν παρόμοιαι τυγχάνουσιν.

If it is true that Aristotle repeatedly characterized physics as lacking in order, the phrase ὥς γε δή τινές φασιν, coming from Th., could have a mildly ironic ring.[1] What Th. here seems to be distancing himself from is the negative connotation of the term ἄτακτος (which follows from the high value attached to τάξις,[2] and which may be involved in the use of the *alpha privans*.[3] Though it cannot, I think, in the face of the examples cited above, be maintained that πολύχους of itself has a distinctly *positive* connotation, the present context lends some support to VALLANCE's opinion (*l.c.* n. 1) that Th.' use of the term πολύχους "perhaps gives some insight into the specific interest in botany and mineralogy which, in a sense, distinguishes him from Aristotle". One may compare 395 FHS&G, where Pseudo-Julian holds that Th. praises the fig-tree more than any other plant, as being susceptible to several different kinds of generation (ποικιλῆς καὶ διαφόρου γενέσεως δεκτικόν) and as compliantly bearing shoots of every kind (εὔκολον παντοίου γένους ἐνεγκεῖν βλάστην).

This introductory paragraph, then, seems to derive its characterizations of the two fields of study from both Academic and Peripatetic conceptions & terminology; cp. Ch. IX, esp. 10 b 19-20 ἔδει γάρ, εἴπερ τούτων χάριν, ἀεὶ κατὰ ταὐτὰ καὶ ὡσαύτως.

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[1] So VALLANCE (1988) 27.
[2] Cp. 6 b 27-8, and commentary *ad loc.*
[3] Cp. note *ad* 5 a 10-3.

4 a 5-6 ἡ δὲ τῶν πρώτων ... κατὰ ταὐτά·

ὡρισμένη: the study of the first things has to be *definite* if the question about its delimitation (πῶς ἀφορίσαι δεῖ 4 a 2) is to be answered. The required definiteness concerns not just the boundaries, but also the nature of this study (and its objects), inasmuch as the interrelation between its parts, if it has any,[1] is likewise well-defined; compare the association of τὸ ὡρίσθαι with τάξις in 6 b 26-8 below. Here again the point of view seems to be authentically Aristotelian: cp. e.g. the following passage, quoted at length for its relevance to the beginning of our treatise:

> Arist. *Protr.* B 33-6 D. ἀεὶ γὰρ γνωριμώτερα τὰ πρότερα τῶν ὑστέρων καὶ τὰ βελτίω τὴν φύσιν τῶν χειρόνων. *τῶν γὰρ ὡρισμένων καὶ τεταγμένων ἐπιστήμη μᾶλλόν ἐστιν ἢ τῶν ἐναντίων, ἔτι δὲ τῶν αἰτίων ἢ τῶν ἀποβαινόντων. ἔστι δ' ὡρισμένα καὶ τεταγμένα τἀγαθὰ τῶν κακῶν μᾶλλον*, ὥσπερ ἄνθρωπος ἐπιεικὴς ἀνθρώπου φαύλου· τὴν αὐτὴν γὰρ ἔχειν ἀναγκαῖον αὐτὰ πρὸς ἄλληλα διαφοράν. *αἴτιά τε μᾶλλον τὰ πρότερα τῶν ὑστέρων*· ἐκείνων γὰρ ἀναιρουμένων ἀναιρεῖται τὰ τὴν οὐσίαν ἐξ ἐκείνων ἔχοντα, μήκη μὲν ἀριθμῶν, ἐπίπεδα δὲ μηκῶν, στερεὰ δὲ ἐπιπέδων, στοιχείων δ' αἱ ὀνομαζόμεναι συλλαβαί.
>
> (34) ὥστ' εἴπερ ψυχὴ μὲν σώματος ἄμεινον (ἀρχικώτερον γὰρ τὴν φύσιν ἐστί), περὶ δὲ σῶμα τέχναι καὶ φρονήσεις εἰσὶν ἰατρική τε καὶ γυμναστικὴ (ταύτας γὰρ ἡμεῖς ἐπιστήμας τίθεμεν καὶ κεκτῆσθαί τινας αὐτάς φαμεν), δῆλον ὅτι καὶ περὶ ψυχὴν καὶ τὰς ψυχῆς ἀρετὰς ἔστι τις ἐπιμέλεια καὶ τέχνη, καὶ δυνατοὶ λαβεῖν αὐτήν ἐσμεν, εἴπερ γε καὶ τῶν μετ' ἀγνοίας πλείονος καὶ γνῶναι χαλεπωτέρων. (35) ὁμοίως δὲ καὶ τῶν περὶ φύσεως· *πολὺ γὰρ πρότερον ἀναγκαῖον τῶν αἰτίων καὶ τῶν στοιχείων εἶναι φρόνησιν ἢ τῶν ὑστέρων· οὐ γὰρ ταῦτα τῶν ἄκρων οὐδ' ἐκ τούτων τὰ πρῶτα πέφυκεν, ἀλλ' ἐξ ἐκείνων καὶ δι' ἐκείνων τἆλλα γίγνεται καὶ συνίσταται φανερῶς*. (36) εἴτε γὰρ πῦρ εἴτ' ἀὴρ εἴτ' ἀριθμὸς εἴτ' ἄλλαι τινὲς φύσεις αἰτίαι καὶ πρῶται τῶν ἄλλων, ἀδύνατον τῶν ἄλλων τι γιγνώσκειν ἐκείνας ἀγνοοῦντας· πῶς γὰρ ἄν τις ἢ λόγον γνωρίζοι συλλαβὰς ἀγνοῶν, ἢ ταύτας ἐπίσταιτο μηδὲν τῶν στοιχείων εἰδώς;

As for Th., however, we shall find there is room for dispute whether a hard and fast line can in fact be drawn between the principles and nature, or between the study of each.[2]

The phrase **ἀεὶ κατὰ ταὐτά** (see also 10 b 20 below) expresses unswerving constancy; as such it is used of the Platonic Form;[3] see e.g.

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[1] See 4 b 8-11; cp., however, 9 a 18-21.

[2] See 319 FHS&G, quoted *ad* ἀτακτοτέρα, 4 a 4, and 4 a 9 ff.; also *ad* 7 a 17-8 ὡρισμέναι γὰρ ἑκάστων αἱ φύσεις ὡς εἰπεῖν.

[3] Cp. Most (1988) 228, 249 n.16.

Plato *Phaedo* 78 D 1-9 αὐτὴ ἡ οὐσία ἧς λόγον δίδομεν τοῦ εἶναι καὶ ἐρωτῶντες καὶ ἀποκρινόμενοι, πότερον ὡσαύτως ἀεὶ ἔχει κατὰ ταὐτὰ ἢ ἄλλοτ' ἄλλως; αὐτὸ τὸ ἴσον, αὐτὸ τὸ καλόν, αὐτὸ ἕκαστον ὃ ἔστιν, τὸ ὄν, μή ποτε μεταβολὴν καὶ ἡντινοῦν ἐνδέχεται; ἢ ἀεὶ αὐτῶν ἕκαστον ὃ ἔστι, μονοειδὲς ὂν αὐτὸ καθ' αὑτό, ὡσαύτως κατὰ ταὐτὰ ἔχει καὶ οὐδέποτε οὐδαμῇ οὐδαμῶς ἀλλοίωσιν οὐδεμίαν ἐνδέχεται; [ ] ὡσαύτως, ἔφη, ἀνάγκη, ὁ Κέβης, κατὰ ταὐτὰ ἔχειν, ὦ Σώκρατες.

In the present passage κατὰ ταὐτά may at the same time underline the correspondence between the study in question and its object: it always *regards* the same objects or facts and thereby *is* always the same ('in the same manner'). Compare

Plato *Phil.* 59 C 2-6 ὡς ἢ περὶ ἐκεῖνα ἔσθ' ἡμῖν τό τε βέβαιον καὶ τὸ καθαρὸν καὶ ἀληθὲς καὶ ὃ δὴ λέγομεν εἰλικρινές, περὶ τὰ ἀεὶ κατὰ τὰ αὐτὰ ὡσαύτως ἀμεικτότατα ἔχοντα, ἢ ἐκείνων ὅτι μάλιστά ἐστι συγγενές· τὰ δ' ἄλλα πάντα δεύτερά τε καὶ ὕστερα λεκτέον.[1]

Tim. 48 E 5 – 49 A 1 ἓν μὲν ὡς παραδείγματος εἶδος ὑποτεθέν, νοητὸν καὶ ἀεὶ κατὰ ταὐτὰ ὄν, μίμημα δὲ παραδείγματος δεύτερον, γένεσιν ἔχον καὶ ὁρατόν.

See also *Tim.* 52 A 1, where this part of being seems to be associated, as here, with a special kind of knowledge (i.e. νόησις): see 51 D 3 – 52 A 7, quoted *ad* ὡς ἀκινήτοις καὶ ἀμεταβλήτοις 4 a 7-8.

4 a 6-9 διὸ δὴ καὶ ... νομίζουσιν αὐτήν.

διὸ δὴ καί expresses that, in the light of the preceding characterizations of the two studies, it is perfectly comprehensible that the study of τὰ πρῶτα is ranked among the objects of intelligence (**ἐν νοητοῖς** and, implying that the two predicates are mutually exclusive: **οὐκ αἰσθητοῖς**)[2] and more generally that it is valued more highly than the study of nature. For the frequent use of διὸ καί[3] introducing what is judged to be in harmony with what precedes compare:

Sens. 80 (Democritus) ἔοικε γὰρ ἀπὸ τοῦ φωτὸς ἢ ἀπὸ ἄλλου τινὸς ποιεῖν τὸ λευκόν· διὸ καὶ τὴν παχύτητα τοῦ ἀέρος αἰτιᾶται πρὸς τὸ φαίνεσθαι μέλαν.

Vent. 15 ἀλλ' ὁ ἥλιος δοκεῖ καὶ κινεῖν ἀνατέλλων καὶ καταπαύειν τὰ πνεύματα· διὸ καὶ ἐπαυξάνεται καὶ πίπτει πολλάκις.

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[1] Cp. 59 B 1; also Iambl. *Comm. Math.* 97.2-8 F. quoted *ad* 5 a 25-8, p. 187 below.

[2] Compare the somewhat less orderly picture implied by τῶν μὲν αἰσθητῶν ... τῶν δ' ἄλλων 11 b 18-9.

[3] Cp. 9 b 15. For the value of καί, compare *ad* ἀφ' ἧς καί 5 b 4 and 5 b 10.

Ign. 50 ἄνω γὰρ ἡ ἰσχὺς πᾶσα καὶ ἡ φορὰ τῆς φλογός· διὸ καὶ ὁ καπνὸς ταύτῃ μάλιστα φέρεται.

68 ἐξαεροῦται γὰρ (sc. τὸ ὑγρὸν) πολὺ καὶ οὐ δίεισι τῇ πυκνότητι· διὸ καὶ ὁ ψόφος ("[the moisture] is largely converted into air, and not being able to pass out because of the compactness, causes a crackle" tr. COUTANT).

CP I.6.8 χρὴ δὲ καὶ τῆς ὑγρότητος τῆς αὐτῶν συμμετρίαν τινὰ ὑπάρχειν. διὸ καὶ τὴν μὲν ἄμπελον προαποτέμνουσιν ἡμέραις τρισὶ πρότερον, ὅπως προαπορρυῇ τὸ δάκρυον καὶ μὴ σήπεται μηδ' εὐρωτιᾷ· ...

The general use of **τιθέναι ἔν τινι** does not quite justify either R-F's translation "which is the reason also why men describe it as concerned with objects of reason" or REALE's "Proprio per questa ragione, si fa consistere il suo oggetto nelle realtà intelligibili, ...". The action normally results in the object of τιθέναι being in what is referred to by the dative complement, as in the phrases τιθέναι τι ἐν χερσί, ἐν φρεσί; hence τιθέναι τινὰ ἐν φιλοσόφοις (Plato *Resp.* 475 D 4): "count ... among". The notion that ἡ τῶν πρώτων θεωρία comes to be ἐν νοητοῖς may be compared with νοῦς becoming νοητός in Arist. *Met.* 1072 b 19-22 αὐτὸν δὲ νοεῖ ὁ νοῦς κατὰ μετάληψιν τοῦ νοητοῦ· *νοητὸς γὰρ γίγνεται* θιγγάνων καὶ νοῶν, ὥστε ταὐτὸν νοῦς καὶ νοητόν.[1]
The expression τιθέναι ἔν τισι fairly often involves a notion of rank and, more generally, a valuation:

Arist. *DA* 402 a 1-4 τῶν καλῶν καὶ τιμίων τὴν εἴδησιν ὑπολαμβάνοντες, μᾶλλον δ' ἑτέραν ἑτέρας ἢ κατ' ἀκρίβειαν ἢ τῷ βελτιόνων τε καὶ θαυμασιωτέρων εἶναι, δι' ἀμφότερα ταῦτα τὴν περὶ τῆς ψυχῆς ἱστορίαν εὐλόγως ἂν ἐν πρώτοις τιθείημεν.

—and, judging from such instances as Soph. *Phil.* 451 ποῦ χρὴ τίθεσθαι ταῦτα, ποῦ δ' αἰνεῖν, ὅταν / τὰ θεῖ' ἐπαινῶν τοὺς θεοὺς εὕρω κακούς;[2] this seems to have become part of the connotation of the verb itself.

Th., then, seems to be telling us here that ἡ τῶν πρώτων θεωρία is *placed in the realm of* the intelligible, i.e. that it has the status of an intelligible, not a perceptible object, with the intelligible implying stability (see below). The ontological counterpart to this view, that this study is *concerned with* the intelligible, not with perceptible things, is made explicit in 4 a 10-1 below—confirming the fairly strict correspondence between a study and its subject-matter.

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[1] Cp. also *CP* III.1.1 (ἡ σκέψις) ἧπερ ἀρχὴ τῆς φύσεως quoted *ad* συνεργοῦντα 4 a 12 below.

[2] "How am I to deem of these things (...)?" tr. JEBB. See also JEBB *ad loc.*

It seems, then, to be implied in the present passage that it is possible to speak of a θεωρία which, being concerned with τὰ νοητά, is νοητή itself, just as it is possible to speak of a πρώτη φιλοσοφία concerned with τὰ πρῶτα (see *ad* ἡ ὑπὲρ τῶν πρώτων θεωρία, 4 a 2-3). It is possible to feel that that this somewhat involved and indirect introduction of the noetic, might betray a preference on the part of the author for a less clear-cut and absolute conception of the province of metaphysics than the view he is referring to: it is significant that Th. begins by speaking in terms of prior and posterior (τὰ πρῶτα) rather than of any intrinsic property (such as τὰ νοητά would involve). Cp. 11 b 17-23; Introduction, p. 12.

Compare, in the next paragraph, τοῖς τε νοητοῖς καὶ τοῖς τῆς φύσεως (4 a 10-1) shifting into οἷον τὰ μὲν πρότερα τὰ δ' ὕστερα, καὶ ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς (4 a 14-6); compare also προτέρα 4 b 6, πρώτοις καὶ ἐν τῷ πρώτῳ 4 b 10-1.

ὡς ἀκινήτοις καὶ ἀμεταβλήτοις: cp. ἐν τοῖς νοητοῖς καὶ φύσει ἀκινήτοις, 152.5-6 FHS&G, quoted *ad* 7 b 9-15, p. 338 n. 1 below.

The association between these concepts, and their attribution to the domain of the intelligible, had been established since Parmenides separated the two domains of knowledge (together with the 'routes' leading to them): Parm. B 8 DK, esp. 26-41. Compare e.g.

> Plato *Tim.* 51 D 3 – 52 A 7 εἰ μὲν νοῦς καὶ δόξα ἀληθής ἐστον δύο γένη, παντάπασιν εἶναι καθ' αὑτὰ ταῦτα, ἀναίσθητα ὑφ' ἡμῶν εἴδη, νοούμενα μόνον· εἰ δ', ὥς τισιν φαίνεται, δόξα ἀληθὴς νοῦ διαφέρει τὸ μηδέν, πάνθ' ὁπόσ' αὖ διὰ τοῦ σώματος αἰσθανόμεθα θετέον βεβαιότατα. δύο δὴ λεκτέον ἐκείνω, διότι χωρὶς γεγόνατον ἀνομοίως τε ἔχετον. τὸ μὲν γὰρ αὐτῶν διὰ διδαχῆς, τὸ δ' ὑπὸ πειθοῦς ἡμῖν ἐγγίγνεται· καὶ τὸ μὲν ἀεὶ μετ' ἀληθοῦς λόγου, τὸ δὲ ἄλογον· καὶ τὸ μὲν ἀκίνητον πειθοῖ, τὸ δὲ μεταπειστόν· καὶ τοῦ μὲν πάντα ἄνδρα μετέχειν φατέον, νοῦ δὲ θεούς, ἀνθρώπων δὲ γένος βραχύ τι. τούτων δὲ οὕτως ἐχόντων ὁμολογητέον ἓν μὲν εἶναι τὸ κατὰ ταὐτὰ εἶδος ἔχον, ἀγένητον καὶ ἀνώλεθρον, οὔτε εἰς ἑαυτὸ εἰσδεχόμενον ἄλλο ἄλλοθεν οὔτε αὐτὸ εἰς ἄλλο ποι ἰόν, ἀόρατον δὲ καὶ ἄλλως ἀναίσθητον, τοῦτο ὃ δὴ νόησις εἴληχεν ἐπισκοπεῖν· τὸ δὲ ὁμώνυμον ὅμοιόν τε ἐκείνῳ δεύτερον, αἰσθητόν, γεννητόν, πεφορημένον ἀεί, γιγνόμενόν τε ἔν τινι τόπῳ καὶ πάλιν ἐκεῖθεν ἀπολλύμενον, δόξῃ μετ' αἰσθήσεως περιληπτόν· ...

By being denied κίνησις and μεταβολή the intelligible is freed from any kind of movement: at least from Parmenides onwards both of these terms had been used to denote (1) locomotion, (2) qualitative as well as quantitative change, and (3) coming-to-be and passing away. The addition of καὶ ἀμεταβλήτοις, however, makes sense because Aristotle had excluded the pair of γένεσις and φθορά from the notion of κίνησις: see e.g.

Arist. *Phys.* 225 a 34 – b 3 ἐπεὶ δὲ πᾶσα κίνησις μεταβολή τις, μεταβολαὶ δὲ τρεῖς αἱ εἰρημέναι (sc. ἡ ἐξ ὑποκειμένου εἰς ὑποκείμενον, ἡ ἐξ ὑποκειμένου εἰς μὴ ὑποκείμενον, ἡ ἐκ μὴ ὑποκειμένου εἰς ὑποκείμενον: 225 a 7-10), τούτων δὲ αἱ κατὰ γένεσιν καὶ φθορὰν οὐ κινήσεις, αὗται δ' εἰσὶν αἱ κατ' ἀντίφασιν,[1] ἀνάγκη τὴν ἐξ ὑποκειμένου εἰς ὑποκείμενον μεταβολὴν κίνησιν εἶναι μόνην.

It seems likely that the philosophers of the Academic-Peripatetic tradition in general constitute the subject of τιθέασιν; Th.' terminology, however, takes into account the Aristotelian position in particular. For the idea of the unmoved condition of the intelligible and the stability of knowledge respectively in Aristotle, see e.g.

Arist. *Met.* 1072 a 26-7 κινεῖ δὲ ὧδε τὸ ὀρεκτὸν καὶ τὸ νοητόν· κινεῖ οὐ κινούμενα. (cp. 5 a 2 below);

Phys. 247 b 9-13 ἡ δ' ἐξ ἀρχῆς λῆψις τῆς ἐπιστήμης γένεσις οὐκ ἔστιν οὐδ' ἀλλοίωσις· τῷ γὰρ ἠρεμῆσαι καὶ στῆναι τὴν διάνοιαν ἐπίστασθαι καὶ φρονεῖν λεγόμεθα, εἰς δὲ τὸ ἠρεμεῖν οὐκ ἔστι γένεσις· ὅλως γὰρ οὐδεμιᾶς μεταβολῆς, καθάπερ εἴρηται πρότερον.

καὶ τὸ ὅλον δὲ σεμνοτέραν καὶ μείζω νομίζουσιν αὐτήν: the order and stability of the first things do not only explain that people ascribe to this field of study the status of what is intelligible, but also account for the general and unqualified esteem in which this study is held. Cp. Arist. *Met.* 1064 b 5-6 βελτίων δὲ καὶ χείρων ἑκάστη λέγεται (sc. ἐπιστήμη) κατὰ τὸ οἰκεῖον ἐπιστητόν.

For τὸ ὅλον generalizing the scope of what precedes, compare

CP II.11.7 καὶ γὰρ πλεῖον ἀφαιρεῖται τῆς φύσεως, καὶ τὸ ὅλον ἀσθενέστερα καὶ μανότερα ταῦτα· ...

II.9.6 διοιχθέντος δὲ τοῦ μέσου, τὴν ὑγρότητα ἐκβόσκονται ("consume") τὴν πλείω, καὶ τῷ ἔξωθεν ἀέρι δίοδον διδόασιν, καὶ τὸ ὅλον εὐπνούστερα ποιοῦσι ("and in a word make the fruit better ventilated" tr. EINARSON/LINK).

δέ indicates that what is added by καί is different from what precedes (in this case more general & less technical than it): compare 10 b 6, καὶ ἕτερα δ' οὐκ ὀλίγα παρόμοια τούτοις; also e.g.

Sens. 4 ὅτι δὲ καὶ τῷ ἐναντίῳ (the opposite element, namely cold) καθ' αὑτὸ ποιεῖ (sc. Parmenides) τὴν αἴσθησιν, φανερὸν ἐν οἷς φησι τὸν νεκρὸν φωτὸς μὲν καὶ θερμοῦ καὶ φωνῆς οὐκ αἰσθάνεσθαι διὰ τὴν ἔκλειψιν τοῦ πυρός, ψυχροῦ δὲ καὶ σιωπῆς καὶ τῶν ἐναντίων αἰσθάνεσθαι. *καὶ ὅλως δὲ* πᾶν τὸ ὂν ἔχειν τινὰ γνῶσιν.

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[1] "that is to say those which imply a relation of contradiction", *RevOT*.

The epithet **σεμνόν** is occasionally associated with νοῦς in

Arist. *Met.* 1074 b 15-8 τὰ δὲ περὶ τὸν νοῦν ἔχει τινὰς ἀπορίας· δοκεῖ μὲν γὰρ εἶναι τῶν φαινομένων θειότατον, πῶς δ' ἔχων τοιοῦτος ἂν εἴη, ἔχει τινὰς δυσκολίας. εἴτε γὰρ μηδὲν νοεῖ, τί ἂν εἴη τὸ σεμνόν, ἀλλ' ἔχει ὥσπερ ἂν εἰ ὁ καθεύδων· ...

In the problem raised by the Eleatic Stranger in Plato's *Soph.*, the qualification σεμνὸν καὶ ἅγιον is applied to τὸ παντελῶς ὄν, which is *without* νοῦς and ἀκίνητον:

Plato *Soph.* 248 E 6 – 249 A 3 τί δὲ πρὸς Διός; ὡς ἀληθῶς κίνησιν καὶ ζωὴν καὶ ψυχὴν καὶ φρόνησιν ἦ ῥᾳδίως πεισθησόμεθα τῷ παντελῶς ὄντι μὴ παρεῖναι, μηδὲ ζῆν αὐτὸ μηδὲ φρονεῖν, ἀλλὰ σεμνὸν καὶ ἅγιον, νοῦν οὐκ ἔχον, ἀκίνητον ἑστὸς εἶναι; [ΘΕΑΙ.] δεινὸν μεντἄν, ὦ ξένε, λόγον συγχωροῖμεν.

μείζων and μέγιστον are often used to assess the importance of some object, in particular to evaluate its contribution to some other object: cp. 9 b 17 and 19; compare

CP II.1.2 μέγιστον μὲν οὖν (ὡς ἁπλῶς εἰπεῖν) παντὶ δένδρῳ καὶ ἡμέρῳ καὶ ἀγρίῳ, καὶ ὅλως δὲ φυτῷ παντί, πρὸς εὐβλάστειαν καὶ εὐκαρπίαν, τὸ χειμασθῆναι χειμῶσιν ὡραίοις καὶ καλοῖς, οὕτως γὰρ αἱ βλαστήσεις κάλλισται καὶ αἱ καρποτοκίαι γίνονται.

IV.6.9 μεῖζον δ' ἔτι παρὰ τὰ σπέρματα καὶ τοὺς καρποὺς ἀπορημάτων (οὐχ ὑποπίπτοντα δὲ ὑπὸ τὴν αὐτὴν αἰτίαν) τὸ περὶ τὸν λωτὸν συμβαῖνον κ.τ.λ.

III.6.5 ὡς γὰρ ὅλως εἰπεῖν οὐδένος ἔλαττον, ἀλλὰ πάντων πρῶτον καὶ μέγιστον, τὸ δύνασθαι θεωρῆσαι ποῖον ἐν ποίᾳ χώρᾳ φυτευτέον, οὐ μόνον ἁπλῶς, ἀλλὰ καὶ αὐτῆς τῆς συνεχοῦς, ὅταν ἀνωμαλὴς ἦ κατὰ τοὺς τόπους ἑκάστους.

III.6.7 καὶ τὸ ὅλον, ὥσπερ μία τις αὕτη διαφορά, καθ' ὕψος καὶ ταπεινότατα, πολλῶν οὐσῶν ἑτέρων καὶ μειζόνων (ὥσπερ ἐν ταῖς ἱστορίαις εἴπομεν), ὧν οὐδεμίαν ἀθέατον εἶναι χρή.

Ign. 10 ἀφέντας δ' οὖν τὰ μείζω καὶ τὰ πρότερον πειρατέον ὑπὲρ τῶν ἐλαττόνων λέγειν ἀρξαμένους ἀπὸ τῆς γενέσεως αὐτοῦ (sc. τοῦ πυρός) καὶ φθορᾶς.

In the present context μείζω seems to express the high valuation accorded to that what is ontologically & epistemologically prior to other things.

Arist. *Met.* 982 a 32 – b 2 ὁ γὰρ τὸ ἐπίστασθαι δι' αὑτὸ αἱρούμενος τὴν μάλιστα ἐπιστήμην μάλιστα αἱρήσεται, τοιαύτη δ' ἐστὶν τοῦ μάλιστα ἐπιστητοῦ· μάλιστα δ' ἐπιστητὰ τὰ πρῶτα καὶ τὰ αἴτια· ...

1026 a 21-2 τὴν τιμιωτάτην (sc. φιλοσοφίαν) δεῖ περὶ τὸ τιμιώτατον γένος εἶναι.

1064 b 3-6 βέλτιστον μὲν οὖν τὸ τῶν θεωρητικῶν (sc. ἐπιστημῶν) γένος,

τούτων δ' αὐτῶν (ἡ θεολογική)· περὶ τὸ τιμιώτατον γάρ ἐστι τῶν ὄντων, βελτίων δὲ καὶ χείρων ἑκάστη λέγεται κατὰ τὸ οἰκεῖον ἐπιστητόν.

For the idea of order and definiteness as valuable see 6 b 27-8 τοῖς γὰρ τιμιωτάτοις οἰκειότατον ἡ τάξις καὶ τὸ ὡρίσθαι; compare also

Arist. *Met.* 1078 a 37 ff. τοῦ δὲ καλοῦ μέγιστα εἴδη τάξις καὶ συμμετρία καὶ τὸ ὡρισμένον, (...).

I.2 (4 a 9-17): *The first question to be answered regards the nature of the boundary to be drawn between the two fields of inquiry, i.e. whether there is some connection between them, and whether their making up together the totality of being is based on some partnership or not. It is more plausible that there is such a connection, and that the objects of the intellect and the objects of sense relate as prior vs. posterior with regard to being and authority, like the relationship between the heavenly bodies and perishable things.*

4 a 9-13 ἀρχὴ δέ, ... τὴν πᾶσαν οὐσίαν.

The first question to be answered (**ἀρχὴ δ'**) after the characterization of both sciences regards the *nature* of the boundary between them: see *ad* ἀφορίσαι 4 a 2. Cp. 9 a 11 ἀρχὴ καὶ μέγιστον ὁ οἰκεῖος τρόπος; 9 a 24-5 ἡ δ' ἀρχὴ πρὸς αὐτὰ ταῦτα καὶ πρῶτον τὸ ἀφορίσαι τί τὸ ἐπίστασθαι; 11 b 27 – 12 a 2 αὕτη γὰρ ἀρχὴ τῆς τοῦ σύμπαντος θεωρίας, ἐν τίσιν τὰ ὄντα κ.τ.λ. Also

CP II.17.8 ἡ δ' ἀρχὴ ληπτέα φυσικῶς, ἀκολουθοῦσι κατὰ τὸ γιγνόμενον, ὅτι πέφυκεν ἐν ἑτέρῳ μόνον ταῦτα γίνεσθαι, ...
Ign. 4 ἡ δ' ἀρχὴ πότερον ἀπ' ἐκείνης αὐτῷ τῆς γενέσεως ἢ ἀπὸ τῶν ὑποκειμένων, ... ⟨ἢ⟩ ἀπ' ἀμφοῖν;

According to Th., as these passages confirm, the question presents itself—'naturally', as it were—as the first to be answered at this moment.[1]

The first alternative (**πότερα** ... **ἢ** ...) is that there should be a "connection" between these two domains.

συναφή (opp. κεχωρισμένα 4 a 12)[2] seems to imply a connection as op-

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[1] Cp. Reale: "Il punto da cui si deve incominciare"; contrast R-F: "Our starting-point ..." (in their introduction, however, the phrase is summarized by "The first question to be considered ...", p. xi) and Tricot: "Notre point de départ ...".
[2] συναφή/συνάπτειν also in 4 a 14, 4 a 20, 4 b 1, 4 b 19.

posed to 'mere' ἁφή ("contact");[1] in Ps.-Arist. *Spir.* 484 b 22 συναφή is said, very concretely, of the junction between the bones of a body. Compare

Plato *Resp.* 588 D 7 – E 1 *σύναπτε* τοίνυν αὐτὰ (sc. ἰδέαν θηρίου ποικίλου καὶ πολυκεφάλου, ἰδέαν λέοντος, ἰδέαν ἀνθρώπου) εἰς ἓν τρία ὄντα, ὥστε πῃ συμπεφυκέναι ἀλλήλοις. [ ] *συνῆπται*, ἔφη. [ ] περίπλασον δὴ αὐτοῖς ἑνὸς εἰκόνα, τὴν τοῦ ἀνθρώπου, ὥστε τῷ μὴ δυναμένῳ τὰ ἔντος ὁρᾶν, ἀλλὰ τὸ ἔξω μόνον ἔλυτρον ὁρῶντι, ἓν ζῷον φαίνεσθαι, ἄνθρωπον.

Soph. 253 D 5-9 οὐκοῦν ὅ γε τοῦτο δυνατὸς δρᾶν (sc. τὸ κατὰ γένη διαιρεῖσθαι) μίαν ἰδέαν διὰ πολλῶν, ἑνὸς ἑκάστου κειμένου χωρίς, πάντῃ διατεταμένην ἱκανῶς διαισθάνεται, καὶ πολλὰς ἑτέρας ἀλλήλων ὑπὸ μιᾶς ἔξωθεν περιεχομένας, καὶ μίαν αὖ δι' ὅλων πολλῶν ἐν ἑνὶ συνημμένην ("and again *one* Form connected in a unity through many wholes", tr. CORNFORD), καὶ πολλὰς χωρὶς διωρισμένας· τοῦτο δ' ἔστι, ᾗ τε κοινωνεῖν ἕκαστα δύναται καὶ ὅπῃ μή, διακρίνειν κατὰ γένος ἐπίστασθαι.

Arist. *Cat.* 4 b 20 ff., where Aristotle is distinguishing two kinds of quantity (τὸ ποσόν), the one discrete (διωρισμένον; e.g. ἀριθμός, λόγος), the other continuous (συνεχές; e.g. γραμμή, ἐπιφάνεια, σῶμα): τῶν μὲν γὰρ τοῦ ἀριθμοῦ μορίων οὐδείς ἐστι κοινὸς ὅρος, πρὸς ὃν συνάπτει τὰ μορία αὐτοῦ ("have no common boundary at which they join together" tr. BARNES)· οἷον τὰ πέντε εἰ ἔστι τῶν δέκα μόριον, πρὸς οὐδένα κοινὸν ὅρον συνάπτει τὰ πέντε καὶ τὰ πέντε, ἀλλὰ διώρισται· ... (4 b 25 ff.). ... —ἡ δὲ γραμμὴ συνεχής ἐστιν· ἔστι γὰρ λαβεῖν κοινὸν ὅρον πρὸς ὃν τὰ μόρια αὐτῆς συνάπτει, ... (5 a 1 f.).

GC 325 a 6-8 (in a doxographical context): τοῦτο δ' οὐδὲν διαφέρειν, εἴ τις οἴεται μὴ συνεχὲς εἶναι τὸ πᾶν ἀλλ' ἅπτεσθαι διῃρημένον, τοῦ φάναι πολλὰ καὶ μὴ ἓν εἶναι καὶ κενόν.

Although in the present context the idea of connection and continuity is obviously relevant, in what seems to be the only occurrence of the noun elsewhere in Th.' writings this aspect seems to be not particularly prominent (although apparently some 'togetherness' is meant to be involved):

CP IV.12.8 (what occurs to the beans at Philippi, when a very cold wind blows on them during the winnowing): ἐὰν δ' ἐν τοῖς ἀχύροις ἀπηλομένοις ἐν τῇ ἅλῳ καὶ καθαροῖς οὖσιν, οὐ μεταβάλλουσιν, ἀλλὰ τεράμονες, ὁτὲ μὲν γὰρ

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[1] The Stoic differentiation between *three* categories of bodies might be conceived, to some extent, as a further elaboration of this distinction:
SVF II.1013, p. 302 (= S.E. *Adv. Math.* IX.78): τῶν τε σωμάτων τὰ μέν ἐστιν ἡνωμένα, τὰ δὲ ἐκ συναπτομένων, τὰ δὲ ἐκ διεστώτων. ἡνωμένα μὲν οὖν ἐστὶ τὰ ὑπὸ μιᾶς ἕξεως κρατούμενα, καθάπερ φυτὰ καὶ ζῷα, ἐκ συναπτομένων δὲ τὰ ἔκ τε παρακειμένων καὶ πρὸς ἕν τι κεφάλαιον νευόντων συνεστῶτα ὡς ἁλύσεις καὶ πυργίσκοι καὶ νῆες, ἐκ διεστώτων δὲ τὰ ἐκ διεζευγμένων καὶ κεχωρισμένων καὶ καθ' αὑτὰ ὑποκειμένων συγκείμενα, ὡς στρατίαι καὶ ποῖμναι καὶ χόροι. ἐπεὶ οὖν καὶ ὁ κόσμος σῶμά ἐστιν, ἤτοι ἡνωμένον ἐστὶ σῶμα ἢ ἐκ συναπτομένων ἢ ἐκ διεστώτων. (Cp. *SVF* III.160, p. 38.7 ff. (= Sen. *Ad Luc.* 102.5).—For the conclusion to this argument ὅτι ἡνωμένον τι σῶμα καθέστηκεν ὁ κόσμος, see *ad* πλὴν εἰ συμβαίνει ... τοῦ ἡλίου 7 a 22 – b 5, p. 322 n., below.

ὑπὸ τῶν ἀχύρων, ὁτὲ δὲ ὑπὸ τῆς πρὸς ἀλλήλους συναφῆς σκεπάζονται, καὶ ἅμα τῆς γῆς θερμότητος ("If it blows on them as they lie threshed on the threshing floor among the chaff and stripped of the pod, they do not change but remain ready, for they are sheltered partly by the chaff and partly by their contact with one another, and then too by the warmth of the ground." tr. EINARSON/LINK)· ὅταν δὲ μετέωροι ληφθῶσι, τό τε πνεῦμα μᾶλλον ἰσχύει καί, οὐδαμόθεν ἐχόντων σκέπην, εἰσδύεται καὶ πήγνυσιν· ἅμα δὲ καὶ ἀσθενέστατοι τότε γίγνονται, γυμνούμενοι πρῶτον τῶν ἀχύρων καὶ τῆς θερμότητος τῆς περιεχούσης· ...

—but of seed 'in a way' attached to one another:

CP I.19.2 τὰ δὲ ἐν ὑμέσι καὶ χιτῶσι περιεχόμενα πλείοσιν, τὰ δὲ καὶ ἀλλήλοις πως συνημμένα καὶ κοινὴν περιοχὴν ἔχοντα, καθάπερ καὶ τὰ τῶν ἀπίων καὶ μήλων, ...

In *CP* IV.7.5. the verb is used of the attachment of the valves of leguminous seeds to the pod (ᾗ καὶ συνάπτουσι πρὸς τὸν λοβόν); in *HP* III.18.4 of the (so-called) 'ground bramble', which roots again when it touches the earth (ὅταν συάπτῃ τῇ γῇ ῥιζούμενος πάλιν), cp. IV.8.6, IV.10.3, VIII.11.8; said of Sicily which in the past was joined to the mainland 184.138 FHS&G (cp. *HP* IV.4.1). With reference to a functional connection,

CP VI.1.2 αὐτὸ γὰρ τοῦτο πρῶτον ἔχει τινὰ σκέψιν, πότερα τοῖς πάθεσι τοῖς κατὰ τὰς αἰσθήσεις ἀποδοτέον, ἢ (ὥσπερ Δημόκριτος) τοῖς σχήμασιν ἐξ ὧν ἑκάστοις (εἰ μὴ ἄρα καὶ ταῦτα συνάπτει πως εἰς τὰς δυνάμεις, κἀκείνων λέγεται χάριν), ... ; for which see also VI.2.1 τάχα δ' ἂν δόξειεν ... καὶ οὗτος ἐκείνων εἶναι χάριν· αὐτῶν γὰρ τῶν δυνάμεων, οὕτως ἀποδιδούς, οἴεται τὰς αἰτίας ἀποδιδόναι δι' ἃς ὁ μὲν στύφει καὶ ξηραίνει καὶ πήγνυσιν, ὁ δὲ λεαίνει καὶ ὁμαλύνει καὶ καθίστησιν, ὁ δὲ ἐκκρίνει καὶ διαχεῖ καὶ ἄλλο τι τοιοῦτο δρᾷ.

HP IX.18.2 (of plants that possess properties affecting lifeless objects) ἑτέραν δέ τινα συνεψομένην τοῖς κρέασι συνάπτειν εἰς ταὐτὸ καὶ οἷον πηγνύναι· ...

Although in this introductory paragraph, then, the functional aspect constitutes the criterion according to which entities qualify to serve as principles, and further on in our treatise Th. himself advances a comparison of the cosmos with a πόλις, a ζῷον, or some other composite whole,[1] the term συναφή as such apparently covers also less organic ways of being joined.

οἷον here indicates that a term is more properly at home in a different context;[2] compare e.g.

[1] See 8 a 3-7.

[2] See also 4 a 21, 5 b 21, 6 a 2, 7 b 5 below.

CP III.1.6 εἴς τε γὰρ ἀέρα μαλακώτερον μετατίθενται καὶ τροφὴν ἀλλοιοτέραν λαμβάνουσιν, ἐξ ἀμφοτέρων ⟨δὲ⟩ τούτων ἡ μεταβολὴ καὶ οἷον ἔκστασις τῆς φύσεως ("from both of these circumstances comes the change and departure (as it were) from their nature.", tr. EINARSON/LINK).

The term **κοινωνία** calls to mind (more or less) technical Platonic use ("communion", "participation"); see e.g. *Phaedo* 100 D 6 τοῦτο ... ἁπλῶς καὶ ἀτέχνως καὶ ἴσως εὐήθως ἔχω παρ' ἐμαυτῷ, ὅτι οὐκ ἄλλο τι ποιεῖ αὐτὸ καλὸν ἢ ἡ ἐκείνου τοῦ καλοῦ εἴτε παρουσία εἴτε κοινωνία; *Soph.* 257 A 9 (... ἐπείπερ) ἔχει κοινωνίαν ἀλλήλοις ἡ τῶν γενῶν φύσις) and, perhaps more relevantly (cp. οἷον, above), the social notion of "partnership", "community", connoting a taking part in a common enterprise: e.g.

Plato *Leg.* 721 A 4 ἀρχὴ δ' ἐστὶ τῶν γενέσεων πάσαις πόλεσιν ἆρ' οὐχ ἡ τῶν γάμων σύμμειξις καὶ κοινωνία;

Arist. *HA* 588 b 33 τὰ δὲ (sc. τῶν ζῴων) καὶ περὶ τὰς τροφὰς ἐκπονεῖται τῶν τέκνων, ὅταν δ' ἀποτελέσῃ, χωρίζονται καὶ κοινωνίαν οὐδεμίαν ἔτι ποιοῦνται· τὰ δὲ συνετώτερα καὶ κοινωνοῦντα μνήμης ἐπὶ πλέον καὶ πολιτικώτερον χρῶνται τοῖς ἀπογόνοις.

EE 1241 b 19 ἐπεὶ δ' ὁμοίως ἔχει ψυχὴ πρὸς σῶμα καὶ τεχνίτης πρὸς ὄργανον καὶ δεσπότης πρὸς δοῦλον,[1] τούτων μὲν οὐκ ἔστι κοινωνία· οὐ γὰρ δύ' ἐστίν, ἀλλὰ τὸ μὲν ἕν, τὸ δὲ τοῦ ἑνὸς οὐδ' ἕν[2] ("for they are not two, but the former is one and the latter a part of that one, not one itself" tr. RACKHAM).

Pol. 1252 a 7 (ἡ πασῶν κυριωτάτη (sc. κοινωνία) καὶ πάσας περιέχουσα τὰς ἄλλας) ἐστὶν ἡ καλουμένη πόλις καὶ ἡ κοινωνία ἡ πολιτική.

The latter connotation seems to be particularly effective in cosmological contexts;[3] compare

Plato *Gorg.* 507 E 6 – 508 A 4 φασὶ δ' οἱ σοφοί, ὦ Καλλίκλεις, καὶ οὐρανὸν καὶ γῆν καὶ θεοὺς καὶ ἀνθρώπους τὴν κοινωνίαν συνέχειν καὶ φιλίαν καὶ κοσμιότητα καὶ σωφροσύνην καὶ δικαιότητα, καὶ τὸ ὅλον τοῦτο διὰ ταῦτα κόσμον καλοῦσιν, ὦ ἑταῖρε, οὐκ ἀκοσμίαν οὐδὲ ἀκολασίαν.

Arist. *Met.* 1075 a 11-25 ἐπισκεπτέον δὲ καὶ ποτέρως ἔχει ἡ τοῦ ὅλου φύσις τὸ ἀγαθὸν καὶ τὸ ἄριστον, πότερον κεχωρισμένον τι καὶ αὐτὸ καθ' αὑτό, ἢ τὴν τάξιν. ἢ ἀμφοτέρως ὥσπερ στράτευμα; καὶ γὰρ ἐν τῇ τάξει τὸ εὖ καὶ ὁ στρατηγός, καὶ μᾶλλον οὗτος· οὐ γὰρ οὗτος διὰ τὴν τάξιν ἀλλ' ἐκείνη διὰ τοῦτόν ἐστιν. πάντα δὲ συντέτακταί πως, ἀλλ' οὐχ ὁμοίως, καὶ πλωτὰ καὶ πτηνὰ καὶ φυτά· καὶ οὐχ οὕτως ἔχει ὥστε μὴ εἶναι θατέρῳ πρὸς θάτερον μηδέν, ἀλλ' ἔστι τι. πρὸς μὲν γὰρ ἓν ἅπαντα συντέτακται, ἀλλ' ὥσπερ ἐν οἰκίᾳ τοῖς

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[1] But see Arist. *Met.* 1075 a 21 quoted below.

[2] οὐδ' ἕν Jackson; οὐδέν MSS.; secl. Victorinus (cp. *RevOT*: "but the first term in each is one, and the second a part of this one").

[3] See also *ad* κεχωρισμένα below.

ἐλευθέροις ἥκιστα ἔξεστιν ὅ τι ἔτυχε ποιεῖν, ἀλλὰ πάντα ἢ τὰ πλεῖστα τέτακται, τοῖς δὲ ἀνδραπόδοις καὶ τοῖς θηρίοις μικρὸν τὸ εἰς τὸ κοινόν, τὸ δὲ πολὺ ὅ τι ἔτυχεν· τοιαύτη γὰρ ἀρχὴ ἑκάστου αὐτῶν ἡ φύσις ἐστίν. λέγω δ' οἷον εἴς γε τὸ διακριθῆναι ἀνάγκη ἅπασιν ἐλθεῖν, καὶ ἄλλα οὕτως ἔστιν ὧν *κοινωνεῖ ἅπαντα εἰς τὸ ὅλον.*[1]

It is also said of the collective parts of a body:

184.163-4 FHS&G (= Philo, *Aet. mundi* 27.143) (ἐπεὶ καὶ) ἄκρον ἀποκοπείς τις δάκτυλον ζῆν οὐ κεκώλυται, εἰ δὲ τὴν κοινωνίαν τῶν μερῶν καὶ μελῶν πᾶσαν, αὐτίκα τελευτήσει.

The addition of **πρὸς ἄλληλα** emphasizes the mutual relation of the partners involved:[2]

Plato *Polit.* 283 D 7-9 τὸ μὲν (sc. μέρος τῆς μετρητικῆς) κατὰ τὴν πρὸς ἄλληλα μεγέθους καὶ σμικρότητος κοινωνίαν, τὸ δὲ κατὰ τὴν τῆς γενέσεως ἀναγκαίαν οὐσίαν.[3]

Symp. 188 C 1 (of sacrifices, divination) ταῦτα δ' ἐστὶν ἡ περὶ θεούς τε καὶ ἀνθρώπους πρὸς ἀλλήλους κοινωνία.

Arist. *Pol.* 1325 b 26 πολλαὶ γὰρ κοινωνίαι πρὸς ἄλληλα τοῖς μέρεσι τῆς πόλεώς εἰσιν.
(see also *GA* 777 b 24-7, p. 318 n. 1.)

Iambl. *Comm. Math.* I, 11.7 F. (on ἡ μεσότης τῶν τε αἰτίων καὶ τῶν ἀποτελουμένων ὑπ' αὐτῶν, i.e. the mathematicals, mathematics being the γνῶσις μέση): συνάπτει τε τὰ γιγνόμενα πρὸς τὰ ὄντα καὶ κοινωνίαν αὐτῶν πρὸς ἄλληλα ἀπεργάζεται.[4]

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[1] "That all must at least come to be dissolved into their elements ["Sc. in order that higher forms of being may be produced by new combinations of the elements.", *ad loc.*], and there are other functions similarly in which all share for the good of the whole." tr. Ross ([2]1928).

[2] Cp. 531.3-5 FHS&G καὶ τοίνυν καὶ τοὺς ἀπὸ τῶν αὐτῶν προπατόρων οἰκείους ἀλλήλων εἶναι νομίζομεν καὶ μέντοι ⟨καὶ⟩ τοὺς ἑαυτῶν πολίτας τῷ τῆς τε γῆς καὶ ⟨τῆς⟩ πρὸς ἀλλήλους ὁμιλίας κοινωνεῖν.
Also Arist. *DA* 407 b 15-9 συνάπτουσι γὰρ καὶ τιθέασιν εἰς σῶμα τὴν ψυχήν, οὐθὲν προσδιορίσαντες διὰ τίν' αἰτίαν καὶ πῶς ἔχοντος τοῦ σώματος. καίτοι δόξειεν ἂν τοῦτ' ἀναγκαῖον εἶναι· διὰ γὰρ τὴν κοινωνίαν τὸ μὲν ποιεῖ τὸ δὲ πάσχει καὶ τὸ μὲν κινεῖται τὸ δὲ κινεῖ, τούτων δ' οὐθὲν ὑπάρχει πρὸς ἄλληλα τοῖς τυχοῦσιν.

[3] The first of these is explained in D 11 – E 1: ἆρ' οὐ κατὰ φύσιν δοκεῖ σοι τὸ μεῖζον μηδενὸς ἑτέρου δεῖν μεῖζον λέγειν ἢ τοῦ ἐλάττονος, καὶ τοὔλαττον αὖ τοῦ μείζονος ἔλαττον, ἄλλου δὲ μηδενός;—for which compare τὰ μὲν πρότερα τὰ δ' ὕστερα and ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς, 4 a 15-6.

[4] Cp. also XXVII, 88.20 F. καθόλου μὲν οὖν δεῖ προειδέναι ὡς παράκεινται τῇ μαθηματικῇ θεωρίᾳ ἥ τε θεολογικὴ ἐπιστήμη καὶ ἡ φυσική, ὥστε καὶ αἱ ἀποδείξεις καὶ τὰ προβλήματα ἐπικοινωνεῖ τούτων τῶν ἐπιστημῶν πρὸς ἀλλήλας. ἔχει μὲν οὖν καὶ τἀληθὲς οὕτως ἡ τῆς γνώσεως συγγένεια περὶ τὰς διαφόρους γνωριστικὰς δυνάμεις συνάπτουσά τινα μίαν οἰκειότητα, ἔχει δὲ καὶ τὰ πράγματα σύνεγγύς πως ὄντα τὴν συνέχειαν τὴν κοινὴν τῶν ἐπιστημῶν πρὸς ἀλλήλας.

Still, the term does more than just vary or strengthen of συναφή:[1] it tends to connote the idea of a common interest: see also συνεργοῦντα 4 a 12. Compare

> *SVF* II.528, 169.21-30 (= Ar. Did. *ap.* Eus. *Praep. Ev.* XV) λέγεσθαι δὲ κόσμον ⟨καὶ⟩ σύστημα ἐξ οὐρανοῦ καὶ ἀέρος καὶ γῆς καὶ θαλάττης καὶ τῶν ἐν αὐτοῖς φύσεων· λέγεσθαι δὲ κόσμον καὶ τὸ οἰκητήριον θεῶν καὶ ἀνθρώπων ⟨καὶ τὸ ἐκ θεῶν καὶ ἀνθρώπων⟩ καὶ τῶν ἕνεκα τούτων γενομένων σύστημα. ὃν γὰρ τρόπον πόλις λέγεται διχῶς τό τε οἰκητήριον καὶ τὸ ἐκ τῶν ἐνοικούντων σὺν τοῖς πολίταις σύστημα, οὕτω καὶ ὁ κόσμος οἱονεὶ πόλις ἐστὶν ἐκ θεῶν καὶ ἀνθρώπων συνεστῶσα, τῶν μὲν θεῶν τὴν ἡγεμονίαν ἐχόντων, τῶν δ' ἀνθρώπων ὑποτεταγμένων. *κοινωνίαν* δ' ὑπάρχειν *πρὸς ἀλλήλους* διὰ τὸ λόγου μετέχειν, ὅς ἐστι φύσει νόμος· τὰ δ' ἄλλα πάντα γεγονέναι τούτων ἕνεκα.

Taking into account the opposition to **τοῖς τῆς φύσεως, τοῖς ... νοητοῖς** effectively replaces τὰ πρῶτα. For τὰ τῆς φύσεως cp. 143.4-5 FHS&G *πάντα γὰρ ἐν κινήσει τὰ τῆς φύσεως*; also

> *CP* II.1.1 ἐπεὶ δὲ πρότερα τὰ τῆς φύσεως, ὑπὲρ τούτων καὶ ῥητέον πρότερον (where the contrast regards ὅσα κατὰ τὰς γεωργικὰς θεραπείας). Cp. also IV.13.4 (3) καὶ ταῦτα μὲν ὡς γεωργικά. (4) τὰ δὲ τῆς φύσεως, οἷον ...

The expression is used also of what belongs to the nature of some entity:

> *CP* II.3.7 ὁ γὰρ ἀὴρ διὰ ψυχρότητα τὰ μὲν ὅλως οὐ δέχεται, τὰ δ' ὅσον εἰς βλάστησιν, ἔνια δὲ εἰς καρπόν· ὁ δὲ οἰκεῖος ἤδη διατελειοῖ[2] τὰ τῆς φύσεως.

Th. accepts the (allegedly general) inference referred to in 4 a 6-7 above that the 'first things' are found among τὰ νοητά, which in this context may be considered as the most likely candidate for occupying the province which should be delimited from that of τὰ αἰσθητά.[3] The effect of this replacement for the present argument is to make it plausible and significant again to identify the objects of our θεωρία as principles prior to the things of nature —but now from a functional point of view: see commentary *ad* πρότερα and *ad* ἀρχάς, 4 a 15.[4]

The alternative (πότερα ... ἢ ..., see above) is that there is no connection or relationship between the objects of thought and the things of nature at all, but that they form two separate domains (**κεχωρισμένα**). τὰ κεχωρισμένα may just denote "separate individuals", without implying a distance: see

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[1] *Contra* Reale, Tricot *ad loc.*

[2] διατελειοῖ τὰ Wimmer; διατελειότητατη U^ar; διὰ τελειότητα u (-οτῆτα N) HP (see Einarson/Link *app. crit.*).

[3] Cp. 319 FHS&G, quoted *ad* ἀτακτοτέρα, 4 a 4, p. 77 above.

[4] See also *ad* 4 b 14 δυνάμει τινὶ καὶ ὑπεροχῇ τῶν ἄλλων.

CP I.11.1 (of a sprouting and bearing fruit at the same time) τοῦτο γὰρ ἐν τοῖς κεχωρισμένοις τῶν ὁμογενῶν ἀξιοῦμεν καὶ ὁρῶμεν συμβαῖνον.

The shift to τά τε νοητὰ καὶ τὰ τῆς φύσεως, represented by **ἑκάτερα**[1] as grammatical subject, adds to the impression of separateness of the domains. By **ὥσπερ** the author places the responsibility for the clause with those who hypothesize non-συναφή and non-κοινωνία. Assuming that they are separate, some sort of cooperation between the two domains which does not involve partnership is required in order to explain their making up the cosmic whole. **δέ** adds something new (συνεργοῦντα) and, given κεχωρισμένα, unexpected; **πως** implies that the idea of a cooperation which does not involve partnership leaves room for specification.

In fact κεχωρισμένα, contrasted as it is with κοινωνία, implies that the two domains which constitute being are *either* incapable of entering into a partnership *or* self-sufficient: compare

Arist. *Pol.* 1253 a 25-9 ὅτι μὲν οὖν ἡ πόλις καὶ φύσει καὶ πρότερον ἢ ἕκαστος, δῆλον· εἰ γὰρ μὴ αὐτάρκης ἕκαστος χωρισθείς, ὁμοίως τοῖς ἄλλοις μέρεσιν ἕξει πρὸς τὸ ὅλον, ὁ δὲ μὴ δυνάμενος κοινωνεῖν ἢ μηδὲν δεόμενος δι' αὐτάρκειαν οὐθὲν μέρος πόλεως, ὥστε ἢ θηρίον ἢ θεός.
The normal situation in a city is a partnership of individuals; an individual which does not take part of the community reveals itself as non-human, whether animal (if it is incapable of being part of a community), or God (if it is self-sufficient and therefore not in need of a partnership).[2]

The relevance of the analogy with a πόλις to our understanding of the cosmic whole is suggested by 8 a 5 below.

συνεργοῦντα ... εἰς is said of individuals striving for some common goal, or of factors contributing to some result:

Arist. *EE* 1245 b 2-4 εἰ δ' αὐτὸν εὖ ζῆν, καὶ οὕτω καὶ τὸν φιλόν, ἐν δὲ τῷ συζῆν συνεργεῖν, ἡ κοινωνία τῶν ἐν τέλει μάλιστά γε ("But if it is pleasanter for a man himself to live well and also his friend, and in their common life to engage in mutually helpful activity, their partnership surely would be above all in things included in the end" *RevOT*).

In conformity with the passage from the *Pol.* just quoted, this cooperation is essential to human beings: ὅτι μὲν τοίνυν καὶ δεῖ συζῆν, καὶ ὅτι μάλιστα βούλονται πάντες, καὶ ὅτι ὁ εὐδαιμονέστατος καὶ ἄριστος μάλιστα τοιοῦτος, φάνερον. (1245 b 9-11)—this in contrast to the self-sufficiency of God:

[1] In logic, τὸ κεχωρισμένον belongs to the relative or relational concepts: τὸ γὰρ κεχωρισμένον τῶν πρός τί ἐστι· τινὸς γάρ ἐστι κεχωρισμένον (90 B 6-7 FHS&G).

[2] This passage, if it is brought to bear on the present context, may suggest the question how, if the two domains of the universe were separate and unconnected provinces bound by no κοινωνία, they *could*, and why they *should* cooperate to make up the totality of being?

αἴτιον δ' ὅτι ἡμῖν μὲν τὸ εὖ καθ' ἕτερον, ἐκείνῳ (sc. τῷ θεῷ) δὲ αὐτὸς αὐτοῦ τὸ εὖ ἐστίν (*ibid.* b 18-9).

Od. 8 δεῖ δ' εἰδέναι ποῖαι ποίοις εὔμικτοι καὶ ποῖαι ποίοις συνεργοῦσιν εἰς τὸ ποιεῖν μίαν ὥσπερ ἐπὶ τῶν χυμῶν.; also *Od.* 58 τὸ γὰρ ὅλον ἄμφω ταῦτα συνεργεῖ πρὸς εὐοσμίαν.

Ign. 60 ἐὰν δ' ἅμα τῇ ὑγρότητι τῇ τοιαύτῃ καὶ τὸ ψυχρὸν προσῇ φύσει, καὶ τοῦτο συνεργεῖν εἰς τὴν σβέσιν ...

Vent. 41 πάντα (all winds) γὰρ μετὰ τοῦ ἡλίου, διαχέοντος τὸ ὑγρὸν ἢ ἀτμίζοντος γίνεται καὶ συνεργοῦντος εἰς τὴν ἀρχήν.

CP IV.11.4 μέγα δὲ καὶ ἡ ὥρα συνεργεῖ· ...

If there is any difference between the two prepositions used with συνεργεῖν, it seems to be that πρός is more apt to express a goal and **εἰς** is more apt to state the effect; compare

Od. 7, which deals with the *artificial* production of odours: εἰσὶ μὲν οὖν καὶ τοῖς ἀμίκτοις ὀσμαί τινες πρὸς ἃς συνεργεῖν πειρῶνται καὶ ταῖς παρα⟨σκευαῖς, ὡς καὶ⟩ πρὸς τὰς τῶν χυμῶν εὐστομίας.

CP III.1.1 ἡ περὶ τῶν φυτῶν θεωρία διττὰς ἔχει τὰς σκέψεις καὶ ἐν δυσίν· μίαν μέν, τὴν ἐν τοῖς αὐτομάτοις γινομένην, ἥπερ ἀρχὴ τῆς φύσεως, ἑτέραν δέ, τὴν ἐκ τῆς ἐπινοίας καὶ παρασκευῆς, ἥν δή φαμεν συνεργεῖν τῇ φύσει πρὸς τὸ τέλος.

In the present context, then, εἰς would seem to be the more obvious choice: if the notion of κεχωρισμένα συνεργεῖν is problematic anyhow, their cooperating to a goal is a fortiori unlikely.

The use of οὐσία in **τὴν πᾶσαν οὐσίαν** (being or reality collectively) seems to be characteristic of our author; see also 11 a 22, 11 b 11.[1]
A potential parallel in Aristotle is

Arist. *Phys.* 189 a 12-5 μίαν (sc. ἀρχήν) μὲν γὰρ οὐχ οἷόν τε, ὅτι οὐχ ἓν τὰ ἐναντία, ἀπείρους δ', ὅτι οὐκ ἐπιστητὸν τὸ ὂν ἔσται, μία τε ἐναντίωσις ἐν πάντι γένει ἑνί, ἡ δ' οὐσία ἕν τι γένος ("and reality is one such kind" tr. CHARLTON),[2] καὶ ὅτι ἐνδέχεται ἐκ πεπερασμένων· ... contrast

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[1] Cp. REALE 146: "Nel primo capitilo troviamo l'espressione "τὴν πᾶσαν οὐσίαν" nel senso di universo o di totalità della realtà dell'universo. ... E, sempre, in quest'ultimo capitolo, leggiamo ancora: "... τῆς ὅλης οὐσίας", "τὴν ὅλην οὐσίαν". Espressioni, queste, usate nel senso in cui Aristotele usava τὸ ὅλον, τὸ πᾶν". And, with the proviso that the term 'substance' seems to be less apt because of its Aristotelian connotations: "A queste espressioni la parola οὐσία viene a dare una particulare pregnanza, appunto in senso tutto cosmologico (come a dire: la sostanza del tutto, la sostanza dell'universo).", *ibid.*

[2] According to WICKSTEED/CORNFORD the reference of οὐσία would be restricted to material nature: "The student must resist the temptation to take οὐσία and γένος in this passage in the sense that first suggests itself, of 'substance' and 'category' respectively. I follow Simplicius (198. 28) in taking οὐσία to stand here and elsewhere in this chapter for 'all the concrete things that constitute Nature and are capable of change,' τὰ φυσικὰ πάντα πράγματα, *as dis-*

Arist. *Phys.* 193 a 25 ὃ γάρ τις αὐτῶν ὑπέλαβε τοιοῦτον (sc. τὴν φύσιν τὴν τῶν ὄντων), εἴτε ἓν εἴτε πλείω, τοῦτο καὶ τοσαῦτά φησιν εἶναι τὴν ἅπασαν οὐσίαν, τὰ δὲ ἄλλα πάντα πάθη τούτων καὶ ἕξεις καὶ διαθέσεις, καὶ τούτων μὲν ὁτοῦν ἀΐδιον (οὐ γὰρ μεταβολὴν αὐτοῖς ἐξ αὐτῶν), τὰ δ' ἄλλα γίγνεσθαι καὶ φθείρεσθαι ἀπειράκις, where the expression concerns the *essential constituent* of reality.[1]

Compare, in Stoic context:

SVF II.424, 140.6-7 (= Galenus *De diff.* III.6): (pneumatici aiunt:) οὐ γὰρ εἶναι τοιαύτην (scil. κενὴν χώραν) οὐδεμίαν ἐν κόσμῳ νομιζούσιν, ἀλλ' ἡνῶσθαι τὴν ὅλην οὐσίαν ἑαυτῇ. Cp. II.533, 170.23; 318, 115.7; 473, 154. 6-9 (= Alex. Aphr. *De mixt.* p. 216) ἔστι δὲ ἡ Χρυσίππου δόξα περὶ κράσεως ἥδε· ἡνῶσθαι μὲν ὑποτίθεται τὴν σύμπασαν οὐσίαν, πνεύματός τινος διὰ πάσης διήκοντος, ὑφ' οὗ συνέχεταί τε καὶ συμμένει καὶ συμπαθές ἐστιν αὐτῷ τὸ πᾶν· κ.τ.λ.

4 a 13-7 εὐλογώτερον δ' οὖν ... τῶν φθαρτῶν.

δ' οὖν singles out the relevant topic or e.g. consideration, as here, abstracting from other aspects of the issue: "at all events", "at any rate"; subjoined to εὐλογώτερον it seems to imply that what is εὔλογον here takes the place of proof.[2]

Taking into account the paradoxical nature of the alternative (see preceding note), the first possibility is more reasonable (**εὐλογώτερον**); εὔλογον involves an implicit presupposition concerning the organization (or even 'economy') of being: see also 4 b 8. So viewed, εὔλογος could be conceived as a less neutral equivalent of εἰκός; compare

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tinct from the immaterial existences touched upon, or dealt with, in the *De caelo* and the *Metaphysica*, and led up to in the *Physics*." (*ad loc.*; italics added). The present context, of course, precludes such an interpretation.

[1] Cp. *Met.* 1076 a 1 ἐπεισοδιώδη τὴν τοῦ παντὸς οὐσίαν ποιοῦσιν: see *ad* 4 a 13-7; cp. *ad* 8 a 22-3 below.

[2] Compare Le Blond (1938) 48-9: "εὔλογος signifie *ordre*, de la manière la plus étendue et la plus variée,—ordre numérique de l'égalité ou de la proportion, ordre logique, ordre plus subtil de toute adaptation, adaptation de la cause à l'effet, de la solution au problème, des motifs à la décision, d'un fait isolé à l'ensemble de l'expérience. Il semble qu'εὔλογος manifeste ce qu'on pourrait appeler la réaction instinctive d'Aristote en face de toute théorie ou de toute constatation nouvelle; il ne se contente pas de l'examiner en elle-même, de la mettre à l'épreuve du raisonnement serré; il consulte aussi, soit avant, soit après le travail scientifique, son instinct, sur l'accord entre cette connaissance et l'ordre du monde, la conviction qu'il possède du travail intelligent de la nature: moyen, non de démonstration proprement dite, mais de "jugement", au sens concret de ce mot." Cp. the quotation from *Vent.* 59, below.

CP II.17.9 τὴν δ' ἰσχὺν εὐλόγως ἔχει (sc. the mistletoe), καὶ διὰ τὴν εὐτροφίαν, καὶ μάλιστ' ἴσως διὰ τὴν αὑτοῦ φύσιν. ἰσχυρότερα δὲ εἰκὸς τὰ ἐν ταῖς ἐλάταις καὶ πεύκαις εἶναι· πλείων γὰρ ἡ τροφὴ καὶ λιπαρωτέρα.

Also

HP I.3.6 ἔχει ... τι τῆς φύσεως κοινὸν ὁμοίως ἐν δένδροις καὶ θάμνοις καὶ τοῖς φρυγανικοῖς καὶ ποιώδεσιν· ὑπὲρ ὧν καὶ τὰς αἰτίας ὅταν τις λέγῃ περὶ πάντων κοινῇ δῆλον ὅτι λεκτέον οὐχ ὁρίζοντα καθ' ἕκαστον· εὔλογον δὲ καὶ ταύτας κοινὰς εἶναι πάντων.

CP I.6.10 εὔλογον δὲ καὶ τὸ καλλοκαρπότερα ταῦτα (trees so grafted) γίνεσθαι, καὶ μάλιστα ἐὰν τὰ ἥμερα εἰς τὰ ἄγρια τιθῆται τῶν ὁμοφλοίων· εὐτροφία γὰρ συμβαίνει πλείων διὰ τὴν ἰσχὺν τῶν ὑποκειμένων.

Sens. 31 τὸ δὲ μετὰ λύπης ἅπασαν (sc. αἴσθησιν) εἶναι οὔτ' ἐκ τῆς χρήσεως ὁμολογεῖται, τὰ μὲν ⟨γὰρ⟩ μεθ' ἡδονῆς τὰ δὲ πλεῖστα ἄνευ λύπης ἐστίν, οὔτ' ἔστι τῶν εὐλόγων. ἡ μὲν γὰρ αἴσθησις κατὰ φύσιν, οὐδὲν δὲ τῶν φύσει βίᾳ καὶ μετὰ λύπης, ἀλλὰ μᾶλλον μεθ' ἡδονῆς, ὅπερ καὶ φαίνεται συμβαῖνον.

Vent. 59 τὸ γὰρ παράλογον αἰτίαν ἐπιζητεῖ, τὸ δ' εὔλογον καὶ ἄνευ αἰτίας συγχωροῦσιν οἱ ἄνθρωποι. δεινοὶ γὰρ προσθεῖναι τὸ ἐλλιπές.

The existential **εἶναί** (τινα συναφήν) answers the question πότερα συναφή τις ..., ἢ οὐδεμία in the affirmative. The absence of connectedness between the parts is expressed in the negative by **μὴ ἐπεισοδιῶδες**; this adjective applied to the whole is equivalent to κεχωρισμένα said of the parts.
The metaphor derives from literary criticism:

Arist. *Poet.* 1451 b 34-5 λέγω δ' ἐπεισοδιώδη μῦθον ἐν ᾧ τὰ ἐπεισόδια μετ' ἄλληλα οὔτ' εἰκὸς οὔτ' ἀνάγκη εἶναι.

The term, which retains a negative connotation,[1] was applied in metaphysical context by Aristotle himself:

Arist. *Met.* 1090 b 13-20 ἔτι δὲ ἐπιζητήσειεν ἄν τις μὴ λίαν εὐχερὴς ὢν περὶ μὲν τοῦ ἀριθμοῦ παντὸς καὶ τῶν μαθηματικῶν τὸ μηθὲν συμβάλλεσθαι ἀλλήλοις τὰ πρότερα τοῖς ὕστερον· μὴ ὄντος γὰρ τοῦ ἀριθμοῦ οὐθὲν ἧττον τὰ μεγέθη ἔσται τοῖς τὰ μαθηματικὰ μόνον εἶναι φαμένοις, καὶ τούτων μὴ ὄντων ἡ ψυχὴ καὶ τὰ σώματα τὰ αἰσθητά· οὐκ ἔοικε δ' ἡ φύσις ἐπεισοδιώδης οὖσα ἐκ τῶν φαινομένων, ὥσπερ μοχθηρὰ τραγῳδία.

1075 b 37 – 1076 a 4 οἱ δὲ λέγοντες τὸν ἀριθμὸν πρῶτον τὸν μαθηματικὸν καὶ οὕτως ἀεὶ ἄλλην ἐχομένην οὐσίαν καὶ ἀρχὰς ἑκάστης ἄλλας, ἐπεισοδιώδη τὴν τοῦ παντὸς οὐσίαν ποιοῦσιν (οὐδὲν γὰρ ἡ ἑτέρα τῇ ἑτέρᾳ

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[1] Cp. NICKAU (1966) 165: "das Adjektiv (steht) nur für das störend Episodische (...), nie für die Ergebnisse des richtigen ἐπεισοδιοῦν".

συμβάλλεται οὖσα ἢ μὴ οὖσα) καὶ ἀρχὰς πολλάς· τὰ δὲ ὄντα οὐ βούλεται πολιτεύεσθαι κακῶς. "οὐκ ἀγαθὸν πολυκοιρανίη· εἷς κοίρανος."[1]

Th.' use of ἐπεισοδιῶδες has in common with these passages from Aristotle the idea that different parts of the universe fail to be in a functional relationship of prior and posterior (compare Aristotle's τὸ μηθὲν συμβάλλεσθαι ἀλλήλοις τὰ πρότερα τοῖς ὕστερον above with ἀλλ' οἷον τὰ μὲν πρότερα τὰ δ' ὕστερα, 4 a 14-5 below).[2] See also below.

τὸ πᾶν, with the article, denotes 'all there is',[3] which may be "–<to be heard>, –<to tell>", as at Aesch. *Prom.* 273 ἀκούσαθ', ὡς μάθητε διὰ τέλους τὸ πᾶν and 627 τί δῆτα μέλλεις μὴ οὐ γεγωνίσκειν τὸ πᾶν;—or 'all there is' *simpliciter*, as here:[4] "i q ὁ οὐρανός, ὁ κόσμος" BONITZ 571 b 54 s.v.
E.g. Emp. B 14 DK τοῦ παντὸς δ' οὐδὲν κενεόν· πόθεν οὖν τί κ' ἐπέλθοι;, Xen. *Mem.* I.4.17 οἴεσθαι οὖν χρὴ καὶ τὴν ἐν τῷ παντὶ φρόνησιν τὰ πάντα ὅπως ἂν αὐτῇ ἡδὺ ᾖ, οὕτω τίθεσθαι ...; Plato *Phil.* 29 B 9-10 οἷον πῦρ ἔστι μέν που παρ' ἡμῖν, ἔστι δ' ἐν τῷ παντί,[5] *Polit.* 270 B 7 τὴν τοῦ παντὸς φοράν, *Tim.* 27 A 4 περὶ φύσεως τοῦ παντός, cp. Arist. *Cael.* 286 b 10-1 σχῆμα δ' ἀνάγκη σφαιροειδὲς ἔχειν τὸν οὐρανόν· τοῦτο γὰρ οἰκειότατόν τε τῇ οὐσίᾳ καὶ τῇ φύσει πρῶτον (see also 285 a 32); κύκλῳ περιφέρεσθαι τὸ πᾶν 287 a 11-2;[6] also

> 227C.4-7 FHS&G (= Alex. Aphr. *In Met.* I.3 984 b 3-4) καὶ γὰρ ὡς ἀΐδιόν ἐστι τὸ πᾶν ἀποφαίνεται (sc. Parmenides) καὶ γένεσιν ἀποδιδόναι πειρᾶται τῶν ὄντων, οὐχ ὁμοίως περὶ ἀμφοτέρων δοξάζων, ἀλλὰ κατ' ἀλήθειαν μὲν ἓν τὸ πᾶν καὶ ἀγένητον καὶ σφαιροειδὲς ὑπολαμβάνων, κ.τ.λ.

The present passage seems perfectly understandable without our assuming that Th. is stating the problem by making use of alternatives inherited from his predecessors. Given that two domains may be recognized which between them constitute the universe, viz. the perceptible and the noetic, the inter-

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[1] sc. ἔστω—which was added by the 15th century scribe E[2]: see JAEGER *app. crit.* To omit the bisyllabic final word of this famous hexameter reveals a scholarly attitude, and may be due either to some scribe or to Aristotle himself; the modality involved is obvious from (οὐ) βούλεται anyway.

[2] According to TARÁN (1981) 322 (*ad* Arist. *Met.* 1090 b 19) however, "in Aristotle's view it is the plurality of *material* principles that makes the Speusippean universe a series of disconnected episodes" (italics added)—which would make the reference of the term quite different.

[3] See also p. 100 n. 1.

[4] See also *ad* τὴν πᾶσαν οὐσίαν 4 a 13.

[5] Cp. Arist. *PA* 641 b 15.

[6] Cp. 10 a 16.

relation between these two domains poses itself as the first question to be asked. Two possibile answers are distinguished—the first one being more reasonable than the other.

Although it is true that some of the terms used to characterize the alternatives are associated with doctrines of Th.' fellow philosophers, the passage makes sense and is apt on its own.

According to BARBOTIN συναφή and κοινωνία refer to Platonic 'participation', whereas κεχωρισμένα expresses the Aristotelian point of view: "Tandis que la κοινωνία platonicienne résorbe finalement toute la réalité du monde sensible dans celle de l'univers intelligible, Aristote reconnaît à chacun de ces ordres une consistance ontologique propre; si le transcendant 'est', la nature 'est' aussi, non pas d'une réalité d'emprunt, mais par une force d'être pleinement sienne." (1954) 66. By assuming this division of roles BARBOTIN is forced to suppose that in τινα συναφὴν (13-4 below) the word is used by Th. in a "sens nouveau", which would express his own opinion on the matter. This novel use would be anti-Platonic and bring Th. very close to the Aristotelian point of view.

BARBOTIN's opinion was criticized by REALE (*ad loc.* and p. 32), who argues that the idea of a συναφή and κοινωνία between the intelligible and the sensible expresses not the Platonic, but the Aristotelian conception: κοινωνία would then be used in a general sense, merely reinforcing συναφή. The idea that the domains are ἑκάτερα κεχωρισμένα, according to REALE, instead of representing the Aristotelian point of view, expresses the view of certain members of the Academy, Speusippus and his followers in particular. Accordingly, Th. would be favouring the Aristotelian solution, "escludendo come illogica quella di Speusippo" (p. 33).

The very fact that the terms used by Th. are capable of such contradictory ascriptions seems to confirm the impression that Th. does not intend to present any historical dispute. In fact, he might seem to be calling in question the entire Academic-Peripatetic tradition including Aristotle himself—to judge from the notion of cooperation contained in the expression *συνεργεῖν* εἰς τὴν πᾶσαν οὐσίαν: contrast Aristotle's criticism to the effect that Speusippus assumes parts of the universe which fail to *συμβάλλεσθαι* ἀλλήλοις (*Met.* 1090 b 15-6, p. 94 above), and his questioning of Xenocrates' ideal magnitudes because it is unclear τί *συμβάλλονται* τοῖς οὖσιν (*Met.* 1090 b 25-6); see also his criticism of the Platonic Ideas:

Met. 991 a 8-13 πάντων δὲ μάλιστα διαπορήσειεν ἄν τις τί ποτε συμβάλλεται τὰ εἴδη τοῖς ἀϊδίοις τῶν αἰσθητῶν ἢ τοῖς γιγνομένοις καὶ φθειρομένοις· οὔτε γὰρ κινήσεως οὔτε μεταβολῆς οὐδεμίας ἐστὶν αἴτια αὐτοῖς. ἀλλὰ μὴν οὔτε πρὸς τὴν ἐπιστήμην οὐθὲν βοηθεῖ[1] τὴν τῶν ἄλλων (οὐδὲ γὰρ οὐσία ἐκεῖνα

[1] βοηθεῖν refers to a one-way relationship.

τούτων· ἐν τούτοις γὰρ ἂν ἦν), οὔτε εἰς τὸ εἶναι, μὴ ἐνυπάρχοντά γε τοῖς μετέχουσιν· κ.τ.λ.

After his implicit dismissal of the second alternative one may suspect that Th. is critical towards the Aristotelian conception of an ἐπιστήμη τοῦ ὄντος ᾗ ὂν καὶ χωριστόν (*Met.* 1064 a 28-9), of which it is claimed by Aristotle (*Met.* 1064 a 34 ff.) that

περὶ τὸ χωριστὸν ἄρα ὂν καὶ ἀκίνητον ἑτέρα τούτων ἀμφοτέρων τῶν ἐπιστημῶν ἔστι τις, εἴπερ ὑπάρχει τις οὐσία τοιαύτη, λέγω δὲ χωριστὴ καὶ ἀκίνητος, ὅπερ πειρασόμεθα δεικνύναι.

In 1073 a 3-5 Aristotle claims to have succeeded in doing so: ὅτι μὲν οὖν ἔστιν οὐσία τις ἀίδιος καὶ ἀκίνητος καὶ κεχωρισμένη τῶν αἰσθητῶν, φανερὸν ἐκ τῶν εἰρημένων· ... Compare

Arist. *Cael.* 269 b 13-7 διόπερ ἐξ ἁπάντων ἄν τις τούτων συλλογιζόμενος πιστεύσειεν ὡς ἔστι τι παρὰ τὰ σώματα τὰ δεῦρο καὶ περὶ ἡμᾶς ἕτερον κεχωρισμένον, τοσούτῳ τιμιωτέραν ἔχον τὴν φύσιν ὅσῳπερ ἀφέστηκε τῶν ἐνταῦθα πλεῖον.

DA 403 b 7-16 τίς οὖν ὁ φυσικὸς τούτων; πότερον ὁ περὶ τὴν ὕλην, τὸν δὲ λόγον ἀγνοῶν, ἢ ὁ περὶ τὸν λόγον μόνον; ἢ μᾶλλον ὁ ἐξ ἀμφοῖν;[1] ἐκείνων δὲ δὴ τίς ἑκάτερος; ἢ οὐκ ἔστι τις ὁ περὶ τὰ πάθη τῆς ὕλης τὰ μὴ χωριστὰ μηδ' ᾗ χωριστά, ἀλλ' ὁ φυσικὸς περὶ ἅπανθ' ὅσα τοῦ τοιουδὶ σώματος καὶ τῆς τοιαύτης ὕλης ἔργα καὶ πάθη· ὅσα δὲ μὴ τοιαῦτα, ἄλλος, καὶ περὶ τινῶν μὲν τεχνίτης, ἐὰν τύχῃ, οἷον τέκτων ἢ ἰατρός, τῶν δὲ μὴ χωριστῶν μέν, ᾗ δὲ μὴ τοιούτου σώματος πάθη καὶ ἐξ ἀφαιρέσεως, ὁ μαθηματικός, *ᾗ δὲ κεχωρισμένα*, ὁ πρῶτος φιλόσοφος; ἀλλ' ἐπανιτέον ὅθεν ὁ λόγος.

Taking into account the question posed at the begining of the treatise (in more modern terms, how to draw the borderline between 'metaphysics' and 'physics'), and the closely analogous nature of study and subject-matter, it does not seem not too bold to suggest that Th. here parts company with Aristotle.[2] If Th.' wording contains any polemics, he seems to be claiming rather that a conception of reality as composed of separate realms would be making the universe not less ἐπεισοδιῶδες than Speusippus does, and that, given that the two domains obviously do make up one universe, this is against all appearances.

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[1] "Is it not rather the one who combines both?", *RevOT*; "I answer, it is rather he who in his definition takes account of both", tr. HICKS.

[2] So that LAKS seems to be putting it mildly: "Thus Theophrastus starts off from the point at which Aristotle's treatise on the first mover had arrived. It is understandable that the disciple should have been interested in the question of what exactly the "connection" consisted of that Aristotle argued for in other terms when he critcized the disarticulation of the world." (1988) 237.

There follows an example (**οἷον**) of a conceivable relation of συναφή between the entities concerned. I take it that the reference of **τὰ μέν** and **τὰ δ**(έ) is specific, to τὰ νοητά and τὰ τῆς φύσεως respectively as "the first group ..., the second ...") rather than general ("some things ..., others ..."), seeing that αὐτῶν in 4 a 17 cannot but refer to τῶν νοητῶν.

The relationship between prior and posterior (**πρότερα ... ὕστερα**) according to Aristotle's sub-division in *Met.* 1018 b 9 ff. covers several species. Some of these are obviously inapplicable: given that τὰ πρῶτα is one of the terms in the relationship which is to be elucidated,[1] it would be unhelpful to cite instances in which things are called prior and posterior according to their proximity to an ἀρχή,[2] e.g. to some place or time, to the prime mover (priority κατὰ κίνησιν) or to some determinate object (priority κατὰ τάξιν).[3] Priority κατὰ δύναμιν, however, might apply:[4]

> Arist. *Met.* 1018 b 22-6 τὸ γὰρ ὑπερέχον τῇ δυνάμει πρότερον, καὶ τὸ δυνατώτερον· τοιοῦτον δ' ἐστὶν οὗ κατὰ τὴν προαίρεσιν ἀνάγκη ἀκολουθεῖν θάτερον καὶ τὸ ὕστερον, ὥστε μὴ κινοῦντός τε ἐκείνου μὴ κινεῖσθαι καὶ κινοῦντος κινεῖσθαι· ἡ δὲ προαίρεσις ἀρχή.

Cp. the supposition at 4 b 13 ff. below: ἀνάγκη δ' ἴσως δυνάμει τινὶ καὶ ὑπεροχῇ τῶν ἄλλων λαμβάνειν, κ.τ.λ.

Priority τῇ γνώσει and priority κατὰ φύσιν καὶ οὐσίαν, however, involve the particular difficulty that 'prior' and 'posterior' interchange with the observer's point of view, i.e. according to whether they are taken κατὰ τὸν λόγον or κατὰ τὴν αἴσθησιν, and κατὰ δύναμιν or κατ' ἐντελέχειαν. Cp. Arist. *Met.* 1018 b 29 – 1019 a 11; also 9 b 6 ff., below.

The next pair **καὶ ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς** is more specific than the former in that it identifies the 'prior' entities as principles from a functional point of view, i.e. as dominant entities.
For the absence of a τὰ μέν,[5] compare

> *HP* I.14.3 αἱ δὲ τοιαῦται τῆς ὅλης οὐσίας φαίνονται δηλονότι τὰ μὲν ἥμερα, τὰ δὲ ἄγρια καὶ τὰ μὲν κάρπιμα, τὰ δὲ ἄκαρπα καὶ ἀείφυλλα καὶ φυλλοβόλα, καθάπερ ἐλέχθη, τὰ δ' ὅλως ἄφυλλα· κ.τ.λ.

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[1] Cp. on καὶ ἀρχάς below.

[2] πρότερα καὶ ὕστερα λέγεται ἔνια μέν, ὡς ὄντος τινὸς πρώτου καὶ ἀρχῆς ἐν ἑκάστῳ γένει, τῷ (εἶναι) ἐγγύτερον ἀρχῆς τινὸς ὡρισμένης Arist. *Met.* 1018 b 9-11.

[3] ταῦτα δ' ἐστὶν ὅσα πρός τι ἓν ὡρισμένον διέστηκε κατά τινα λόγον Arist. *Met.* 1018 b 26-7.

[4] The fact that this kind of priority would qualify, whereas priority in terms of proximity to the first mover does not apply, συνάπτει δέ πως ... πρὸς τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν (sc. ἀπορίαν), to quote the words of our author at 10 a 19-21.

[5] See K-G II.272-3; Bonitz 454 a 25-8.

Also I.4.3 ἢ τῷ ἔχειν τὰ δὲ μὴ ἔχειν, ἢ τῷ πλείω τὰ δ' ἐλάττω (see *ad* διῄρηται, 9 a 18); *Lap.* 28 ἢ ξηρότερον τὸ δ' ὑγρότερον.

To adopt the terminology of κοινωνία, as we are surely entitled to do after Th.' own suggestion at 4 a 10 above, the present characterization makes it plausible that a partnership κατ' ἀναλογίαν is involved, i.e. one between entities differing in status, as in an aristocracy, rather than a κοινωνία κατ' ἀριθμόν, one between equivalent entities (as in a democracy): compare

Arist. *EE* 1241 b 33-40 ἐπεὶ δὲ τὸ ἴσον τὸ μὲν κατ' ἀριθμὸν τὸ δὲ κατ' ἀναλογίαν, καὶ τοῦ δικαίου εἴδη ἔσται καὶ τῆς φιλίας καὶ τῆς κοινωνίας. κατ' ἀριθμὸν μὲν γὰρ ἡ ⟨δημοκρατικὴ⟩[1] κοινωνία, καὶ ἡ ἑταιρικὴ φιλία, τῷ γὰρ αὐτῷ ὅρῳ μετρεῖται· κατ' ἀναλογίαν δὲ ἡ ἀριστοκρατικὴ ἀρίστη καὶ βασιλική· οὐ γὰρ ταὐτὸν δίκαιον τῷ ὑπερέχοντι καὶ ὑπερεχομένῳ ἀλλὰ τὸ ἀνάλογον. καὶ ἡ φιλία δὲ ὁμοίως πατρὸς καὶ παιδός, καὶ ἐν ταῖς κοινωνίαις ὁ αὐτὸς τρόπος.

The genitive **τῶν φθαρτῶν** could be adapted to either of the constructions used in the preceding phrases: τὰ ἀίδια may be said (1) to be πρότερα τῶν φθαρτῶν,[2] or (2) to be τὰ ἀίδια (sc. αἴτια) τῶν φθαρτῶν.[3] For (2) cp. the ἀπορία discussed in

Arist. *Met.* 1060 a 27-36 ἔτι δ' εἴπερ ἔστι τις οὐσία καὶ ἀρχὴ τοιαύτη τὴν φύσιν οἵαν νῦν ζητοῦμεν, καὶ αὕτη μία πάντων καὶ ἡ αὐτὴ τῶν ἀϊδίων τε καὶ φθαρτῶν, ἀπορίαν ἔχει διὰ τί ποτε τῆς αὐτῆς ἀρχῆς οὔσης τὰ μέν ἐστιν ἀίδια τῶν ὑπὸ τὴν ἀρχὴν τὰ δ' οὐκ ἀίδια (τοῦτο γὰρ ἄτοπον)· εἰ δ' ἄλλη μέν ἐστιν ἀρχὴ τῶν φθαρτῶν ἄλλη δὲ τῶν ἀϊδίων, εἰ μὲν ἀίδιος καὶ ἡ τῶν φθαρτῶν, ὁμοίως ἀπορήσομεν (διὰ τί γὰρ οὐκ, ἀϊδίου τῆς ἀρχῆς οὔσης, καὶ τὰ ὑπὸ τὴν ἀρχὴν ἀίδια;)· φθαρτῆς δ' οὔσης ἄλλη τις ἀρχὴ γίγνεται ταύτης κἀκείνης ἑτέρα, καὶ τοῦτ' εἰς ἄπειρον πρόεισιν.

There is no need to choose between (1) and (2); in fact, the conjunction **καὶ** (ἀρχάς) rather than ἤ helps towards perceiving and treating them as one complex;[4] so: "(prior, and principles,) just as the eternal things too (are) in relation to the perishable".[5]

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[1] δημοκρατικὴ add. Susemihl.

[2] Cp. Arist. *Met.* 1050 b 6-7 τὰ μὲν ... ἀίδια πρότερα τῇ οὐσίᾳ τῶν φθαρτῶν.

[3] So Usener (1861) 264, who conjectures καὶ ὥσπερ αἴτια τὰ ἀίδια τῶν φθαρτῶν which has been adopted by Reale.

[4] The conjunction **καὶ** (ἀρχάς) rather than *ἤ helps towards perceiving and treating them as one complex.

[5] One thing which Th. certainly is *not* arguing is the division between two classes of objects which is taken for granted in Arist. *DA* 413 b 24-7 περὶ δὲ τοῦ νοῦ καὶ τῆς θεωρητικῆς δυνάμεως οὐδέν πω φανερόν, ἀλλ' ἔοικε ψυχῆς γένος ἕτερον εἶναι, καὶ τοῦτο μόνον ἐνδέχεται χωρίζεσθαι, καθάπερ τὸ ἀίδιον τοῦ φθαρτοῦ.

This third pair of τὰ ἀίδια and τὰ φθαρτά is apparently meant to provide an example (**ὥσπερ**) of the two relations just mentioned: given that the eternal and the perishable things too (**καί**) show a relationship of prior and posterior, and are related to each other as principles to subordinate entities, the same relation is likely to obtain in the (less obvious) case of the objects of the intellect and the physical objects.[1]

In view of the weight which Th. seems to attach to his example, I submit that **τὰ ἀίδια** primarily envisages the heavenly bodies in particular: the predominance exerted by the heavenly bodies over the things of nature is emphasized at several places in the following argument.[2]

I.3 (4 a 17 – b 5): *What kind of things, then, are the first principles? Mathematical objects in any case do not qualify, insofar as they do not seem to have independent existence; or if they have, they do not meet the requirement of a connection with the things of nature—or in any case they do not connect with the things of nature in such a way as to produce their various kinds of movement.*

4 a 17-8 εἰ δ' οὖν οὕτω, ... ἐν ποίοις;

οὕτω, i.e. in the latter case, that there is some συναφή,[3] and the answer to the question πῶς ἀφορίσαι δεῖ in 4 a 2 will not involve a separation between the two domains.[4]

δ' οὖν introduces the question which what precedes leads up to.[5] If there is no clear-cut borderline between the intelligible 'first' things and the things of nature, but the two domains are somehow connected, then the capacity to connect with the sensible things provides us with a critical test for determining the nature and the identity of the intelligible entities. For **αὐτῶν** = τῶν νοητῶν cp. 4 a 10-1[6] and 19, and see *ad* γάρ, 4 a 18.

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[1] Noticeably, if the entities which make up the universe are supposed to be in a relationship of prior and posterior, τὸ πᾶν might justly be called a ὅλον: Arist. *Met.* 1024 a 1-3 ἔτι τοῦ ποσοῦ ἔχοντος δὲ ἀρχὴν καὶ μέσον καὶ ἔσχατον, ὅσων μὲν μὴ ποιεῖ ἡ θέσις διαφοράν, πᾶν λέγεται, ὅσων δὲ ποιεῖ, ὅλον. Cp. also 1069 a 20 καὶ εἰ ὡς ὅλον τι τὸ πᾶν, ἡ οὐσία πρῶτον μέρος· ...

[2] E.g. 7 b 5 οἷον γεννῶντος τοῦ ἡλίου; see note *ad loc.*

[3] See 4 a 14, and *ad* συναφή, 4 a 9-10.

[4] An answer which will have to take into account the correspondence between a science and its object: see *ad* ἀτακτοτέρα 4 a 4.

[5] Cp. VAN OPHUIJSEN (1993) 84; 91.

[6] Where τὰ νοητά replaced, therefore was coextensive with, τὰ πρῶτα.

The question **τίς ἡ φύσις ... καὶ ἐν ποίοις** takes up the καὶ ποίοις, or what may be called the qualitative part of the question πῶς ἀφορίσαι δεῖ καὶ ποίοις in 4 a 2: we now come to the question of the nature—which might be e.g. that of an ἀρχή[1]—and the identity of these entities: ἐν ποίοις; "in what things are they to be found?", to which the answer might be e.g.: ἐν τοῖς μαθηματικοῖς.
φύσις does not here refer to "nature" as the domain of physics, but, with a genitive adjunct, to the nature *of* something, like οὐσία and, in a specialized sense, τὸ τί ἐστι, τὸ ποῖόν ἐστι.[2] Similarly 5 a 2-3 ἡ τοῦ ὀρεκτοῦ φύσις, 8 b 8 τὴν τοῦ παντὸς φύσιν, 10 a 2 τίς ἡ φύσις ἑκάστου.

4 a 18-20 εἰ μὲν γὰρ ... τοῖς αἰσθητοῖς

If the two domains show some sort of connection, the mathematical objects do not qualify as sole occupants of the realm of the intelligible.

εἰ **μέν** is answered by εἰ δ' in 4 b 6. **γάρ** presupposes the relevance of the connection between the two domains as a critical test for the identity of the intelligible entities sought; the preceding question remains, since the mathematical objects fail to pass the test.

ἐν τοῖς μαθηματικοῖς supplies one current answer to the question ἐν ποίοις (17-8) which, however, does not satisfy the postulate of συναφή. **μόνον** conveys that the requirement of a συναφή with the objects of sense rules out an *identification* of τὰ νοητά with τὰ μαθηματικά: there must at least be other objects of thought besides these to take care of the connection with the objects of nature.

The term τὰ μαθηματικά belongs to a context of education and science in which learning (μάθημα) involves knowledge of quantitative, in particular arithmetical and geometrical properties of the cosmos, and thereby recalls Pythagorean practice.[3] We find both περὶ μαθηματικῶν and περὶ μαθημάτων as titles of a work by Archytas (B 3, I.436.14-7 DK); cp. Plato *Tim.* 88 C 1 τὸν δὴ μαθηματικὸν ἤ τινα ἄλλην σφόδρα μελέτην διανοίᾳ κατεργαζόμενον καὶ τὴν τοῦ σώματος ἀποδοτέον κίνησιν, where Timaeus, "as a Pythagorean, assumes that mathematics, τὰ μαθήματα, are the supreme intellectual occupation".[4]

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[1] As was suggested already in 4 a 15; see ἀρχῆς φύσιν ἐχούσας, 4 b 9.

[2] Cp. HOLWERDA (1955) 8-9. For a helpful survey of the history of this term and of different valuations involved see e.g. LECLERC (1972) 101-13.

[3] See Iambl. *Comm. Math.* 34.

[4] TAYLOR *ad loc.* (p. 623); see also DE RIJK (1965) 67-73.

Elsewhere in Plato, however, the adjective refers to learning in general: τὸ δὴ μαθηματικὸν ... εἶδος ὅλον καὶ τὸ τῆς γνωρίσεως, *Soph.* 219 C 2 "sich mit der Wissenschaft (μάθημα) befassend, wissenschaftlich";[1] in *Leg.* 817 E 5 arithmetic, plain and solid geometry, and astronomy are referred to as three "studies fit for free men" (τοῖς ἐλευθέροις ... μαθήματα) among others.

The technical terminology of ἡ μαθηματική (ἐπιστήμη) as one of the theoretical sciences and of τὰ μαθηματικά (mathematical entities: numbers and magnitudes) as its subject-matter seems to have been established by Aristotle. However, even in Aristotle an influence of Pythagorean educational practice perhaps makes itself felt when he applies the wider and less technical term τὰ μαθήματα[2] specifically to mathematics—as Th. does at 9 a 17.

The number of possible referents for (καθάπερ) τινές (φασιν) is limited by the addition of (ἐν τοῖς μαθηματικοῖς) μόνον, for which cp. Arist. *Met.* 1076 a 21-2 ἕτεροι δέ τινες τὰς μαθηματικὰς μόνον οὐσίας εἶναί φασι (cp. 1069 a 36), 1080 b 14-6 οἱ δὲ τὸν μαθηματικὸν μόνον ἀριθμὸν εἶναι, τὸν πρῶτον τῶν ὄντων, κεχωρισμένον τῶν αἰσθητῶν, 1090 b 17-8 τοῖς τὰ μαθηματικὰ μόνον εἶναι φαμένοις.
In *Met.* 1076 a 17 ff. these philosophers are contrasted with (1) those who posit both ideas and mathematical numbers (οἱ μὲν δύο ταῦτα γένη ποιοῦσι, τάς τε ἰδέας καὶ τοὺς μαθηματικοὺς ἀριθμούς, 19-20), and (2) those who acribe to both classes one nature (οἱ δὲ μίαν φύσιν ἀμφοτέρων, 20-1). Presumably these are (1) Plato (and his most orthodox followers) and (2) Xenocrates respectively.[3] Those who hold that only mathematicals have a separate existence might be identified as "the Pythagoreans and Speusippus",[4] or more probably just Speusippus, since "Aristotle is thinking of those who believe that mathematicals exist *apart from the sensibles* (1076 A 10-19), which is *not* the view of the Pythagoreans": TARÁN (1981) 307.

In the present context, however, there is no reason why the Pythagoreans should not be included: τὰ νοητά is a comparatively non-committal term, interchangeabe with τὰ πρῶτα, and indifferent with regard to separateness or inseparateness.
As KRAEMER points out,[5] it is most unlikely that καθάπερ τινές φασιν should refer to Xenocrates as well: in 6 b 7-9 below Th. makes it sufficiently clear that he does not take Xenocrates to identify τὰ νοητά with τὰ μαθηματικά.[6]

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[1] AMMANN (1953) 119.
[2] "doctrina mathematica", BONITZ s.v.
[3] See ROSS II.408 *ad loc.*
[4] ROSS *loc. cit.*; cp. I.lxxii-iv.
[5] KRAEMER (1973) 208 with note 14; *contra* R-F, TRICOT, REALE.
[6] *Contra* L-M *ad loc.*

Our treatise contains, in contexts where they seem to be interchangeable,[1] 17 instances of **καθάπερ** as against 6 of ὥσπερ. In all but two[2] of these 17, however, ὥσπερ would have yielded hiatus.[3]

If the noetic entities we are looking for are to be found in the mathematicals only, the connection (**ἡ συναφή**)[4] now taken for granted between τὰ νοητά and τὰ τῆς φύσεως (here referred to as **τοῖς αἰσθητοῖς**) is "not too (clearly) marked". **οὔτ' ἄγαν** is an instance of litotes: ἄγαν always expresses an excessive degree: Arist. *Pol.* 1324 b 23 καίτοι δόξειεν ἂν ἄγαν ἄτοπον ἴσως εἶναι, 1306 b 3 διὰ τὸ ἄγαν δεσποτικὰς εἶναι; Eur. *Med.* 305 (σοφὴ γὰρ οὖσα ...) εἰμὶ δ' οὐκ ἄγαν σοφή.[5]

For **εὔσημος** compare

> *CP* III.8.2 (particular roots of plants should not be cut), καὶ γὰρ τὸ γυμνοῦν (pruning) ἐπὶ πλέον χαλεπόν, καὶ ὅλως οὐκ εὔσημον ὅθεν ἀφαιρετέον· ...
>
> VI.19.5 διὰ τοῦτο γὰρ καὶ τὰ ἴχνη τῶν λαγῶν εὐσημότερα ψακάσαντος μαλακῶς ὑπ' αὐτὴν τὴν κυνηγίαν ("This moreover is why the tracks of hares are more easily made out when a light drizzle has fallen just before the hunt" tr. EINARSON/LINK).

Also

> Ps.-Arist. *Color.* 792 b 1 ἔστι ... τῶν χρωμάτων οὐχ ἁπλᾶ μέν, λόγον δ' ἔχει πρός τινα τὸν αὐτὸν τῶν συνθέτων ὅνπερ τὰ ἁπλᾶ πρὸς ἑαυτά, διὰ τὸ τὰ ἁπλᾶ πρὸς μίξιν ἑνὸς ἔχειν, καὶ μὴ εὔσημον ἐν τῷ παντί, καὶ προστεθεωρημένον κατασκευάζειν ὁμοίως.
>
> Arist. *Meteor.* 363 a 27 δεῖ δὲ περὶ τῆς θέσεως ἅμα τοὺς λόγους ἐκ τῆς ὑπογραφῆς θεωρεῖν. γέγραπται μὲν οὖν, τοῦ μᾶλλον εὐσήμως ἔχειν, ὁ τοῦ ὁρίζοντος κύκλος· διὸ καὶ στρογγύλος.

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[1] I.e. not counting quasi-adverbial ὥσπερ at 4 a 11-2, 5 b 18, and 10 b 7-8, or ὥσπερ ἂν εἰ at 4 b 15.

[2] Those at 8 b 3 and 10 a 23.

[3] JAEGER (1938) 16-20 points out Aristotle's predilection for καθάπερ, allegedly influenced by Plato's later style: "καθάπερ ist ein etwas gespreiztes Wort, das aus der Kanzlei- und Urkundensprache stammt" (*ib.* 18). Whereas in earlier literary texts ὥσπερ prevails, in inscriptions καθάπερ is common from early times: "Eben weil das Wort für das Gefühl der Athener etwas von der Steifheit und Umständlichkeit des Kanzleistils an sich hatte, mieden sie es in älterer Zeit, während sich später die Empfindung dafür mehr abstumpfte", DITTENBERGER (1981) 338-9. Cp. HUBY (1962), who suggests that "the young Aristotle was fascinated by this grand new word [sc. καθάπερ] and used it first to the exclusion of ὥσπερ, but soon lost his stiffness as a writer and began to use ὥσπερ on the whole more frequently."

[4] See 4 a 9-10, 4 a 14 with notes.

[5] Cp. *ib.* 583.

Elsewhere εὔσημος comes nearer to meaning "worth noting", "significant":

Ps.-Arist. *Probl.* 941 b 23 ὅλου γάρ ἐστι μέρος εὐσημότατον ὁ εἰρημένος χρόνος ("for the said date [sc. the fifteenth day after the solstice] is simply the most significant part of a whole", *RevOT*).

Ps.-Arist. *Physiogn.* 806 a 35 εἰ μὲν οὖν ἀσαφὴς ἢ μὴ εὔσημος ἦν ἡ τοιαύτη διέξοδος, ἀπέχρησεν ἂν τὰ εἰρημένα. νυνὶ δ' ἴσως βέλτιόν ἐστι καθ' ἕκαστον περὶ πάντων ... ἀκριβέστερον φράσαι ("Were this list [sc. which physiognomists always give of the sources in which they find their signs] plain or not obscure, what I have said would suffice", *RevOT*).

The implausibility of mathematical entities connecting with the physical objects so as to make up between them the cosmic whole is elaborated 4 b 2 ff.; compare

Arist. *Cael.* 300 a 14-9 τὸ δ' αὐτὸ συμβαίνει καὶ τοῖς ἐξ ἀριθμῶν συντιθεῖσι τὸν οὐρανόν· ἔνιοι γὰρ τὴν φύσιν ἐξ ἀριθμῶν συνιστᾶσιν, ὥσπερ τῶν Πυθαγορείων τινές· τὰ μὲν γὰρ φυσικὰ σώματα φαίνεται βάρος ἔχοντα καὶ κουφότητα, τὰς δὲ μονάδας οὔτε σώματα ποιεῖν οἷόν τε συντιθεμένας οὔτε βάρος ἔχειν.

4 a 20 – b 2 οὔθ' ὅλως ... οὐδεμίαν ἔχει φύσιν·

τοῦ παντός JCL Ishaq; παντός cet.; πάντως Jaeger (1932) 293, cp. R-F *ad loc.*; περᾶναί τι susp. Usener (1861) 264; "fort. αἴτιά τινος" Usener (1890).

The second οὔτε introduces an even more cogent objection against the mathematicals being the intelligible objects sought: not only are they unlikely to show the required connection with the things of nature, but they are also deficient in their (ontological) status, i.e. reality.

For the use of **ὅλως** with negative "not at all", see LSJ s.v. ὅλος III.3. Cp.

Ign. 2 εἰ δ' ἄρα μὴ τοῦτ', ἀλλ' ἐκεῖνό γε φανερόν, ὅτι πλείστας ἔχει γενέσεις (sc. τὸ πῦρ), ὧν οὐδεμία τοῖς ἄλλοις ὑπάρχει οὐδὲ ὅλως ὁ τρόπος οἰκεῖος, ἀλλὰ πάντων, ὥσπερ ἐλέχθη, φυσική τις μεταβολὴ καὶ γένεσις ("nor do they have any special way of generation; rather they all have a natural interchangeability and natural generation" tr. Coutant).

Od. 41 ὥστε δι' ἄμφω τηροῦσι, καὶ τῷ ψυχρῷ καὶ τῷ πυκνῷ, μήτε διιέντες ἔξω τὸν ὀσμὴν μήθ' ὅλως ἐπιδεχόμενοι μηδέν.

HP I.8.1 ἄνοζα δὲ λέγω οὐχ ὥστε μὴ ἔχειν ὅλως—οὐδὲν γὰρ τοιοῦτο δένδρον, ἀλλ' εἴπερ, ἐπὶ τῶν ἄλλων οἷον σχοῖνος τύφη κύπειρος ὅλως ἐπὶ τῶν λιμνωδῶν—ἀλλ' ὥστε ὀλίγους ἔχειν.

Cp. also *HP* I.14.3 καὶ ἀείφυλλα καὶ φυλλόβολα, ..., τὰ δ' ὅλως ἄφυλλα quoted *ad* καὶ ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς 4 a 15-6.

ἀξιόχρεα ... τοῦ παντός: the majority of the manuscripts reads παντός. This reading is adopted by R-F, who translate, however, "nor do they appear, in general, equal to their whole task"—which seems to require τοῦ παντός;[1] and by L-M, who translate "ils [les objets mathématiques] paraissent bien ne pas posséder une utilité à la hauteur de toute chose".[2]

The context strongly suggests that this second objection is on a different level from the preceding one, as concerning the ontological status of the mathematicals, which are suspected of being mere constructs of the human mind.[3] It thus yields more sense to read τοῦ παντός "the universe" with JCL.[4] The epithet ἀξιόχρεως, "c. gen. rei, *worthy, deserving of*",[5] seems to suit such a context perfectly:[6] the mathematicals do not appear to be νοητά 'worthy of the universe' in the sense that they are not *real enough* or not *powerful enough* to account for the universe as we know it.

Jaeger's conjecture of πάντως[7] makes a slightly awkward combination with ὅλως. MARGOLIOUTH claims for this conjecture the support of the Arabic translation: "*nor are they altogether such as are needed or can be useful in all* or *on the whole*" (1892) 195); contrast ALON: "and they are generally neither necessary nor useful to the whole" (1985) 206. On either interpretation, however, the translator does not seem to have been perfectly familiar with the Greek ἀξιόχρεως.

The same goes for the Latin translation "neque omnino inutilia videntur ab universo" (Barthelomey): "Der Übersetzer verwechselte wahrscheinlich ἀξιόχρεα mit ἄχρεια. Was hinter *ab universo* steckt, ist nicht klar. Es liegt nahe, Jaegers Conjectur πάντως darin zu sehen." KLEY (1936) 16 *ad loc.*[8]

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[1] For τὸ πᾶν "all there is <to be done>" see *ad* 4 a 14 above. Cp. also SAMBURSKY (1956) 48: "nor does it seem capable of actually performing anything", which might seem to require οὐδενός rather than παντός.

[2] "en prenant πᾶν dans un sens distributif", *ad loc.*

[3] See *ad* γάρ 4 a 21 and εἰ δὲ μή, οὐχ ὥστε ... 4 b 1.

[4] It is obscure to me why L-M assume that in these manuscripts the article has been added "sans doute par conjecture, comme cela semble être aussi le cas dans Ishâq." (*ad loc.*).

[5] LSJ s.v. III.

[6] Things judged ἀξιόχρεα of something include (1) events ἀξιόχρεα of being told: Hdt. V.65 ἀξιόχρεα ἀπηγήσιος, (2) a retribution ἀξιόχρεως of a crime: Dem. XIX.131 σκοπεῖτε τοίνυν τί ἔσται τίμημα, ὃ ταύτην ἕξει τὴν ἀξίαν ὥστε τοσούτων ἀξιόχρεων φαίνεσθαι, and (3) a surety ἀξιόχρεως of such a great boon: Dem. VIII.49 εἰ μὲν γάρ ἐστί τις ἐγγυητὴς θεῶν (οὐ γὰρ ἀνθρώπων γ' οὐδεὶς ἂν γένοιτ' ἀξιόχρεως τηλικούτου πράγματος) ὡς ... οὐκ ἐπ' αὐτοὺς ὑμᾶς τελευτῶν ἐκεῖνος ἥξει, ... With εἰς + acc. 584A.378 FHS&G οὐκ ἀξιόχρεως δ' εἰς τὸ θύειν θεοῖς πάντας ἡμᾶς ἡγουμένους ("not thinking that all of us are worthy to sacrifice to gods" tr. FHS&G).

[7] See above; adopted by REALE: "nè essi, in generale, risultano affatto idonei a quelle funzioni".

[8] Unless we are to take "ab universo" as rendering τοῦ παντός, to be construed with "inutilia" as "of no use with respect to the universe"? Cp. ALON, above.

γάρ introduces a ground for the second, more general objection against the mathematicals as principles of the sensible things: they do not qualify since they seem to be mere constructs of the mind.[1]

The mathematicals seem to be products of our own contrivance (**μεμηχανημένα ... δι' ἡμῶν**), a form of 'cultural achievement', so to speak (**οἷον**): the term μεμηχανημένα is at home in the context of the τέχναι.[2] Compare

> Isocr. XV.254 οὐ μόνον τοῦ θηριωδῶς ζῆν ἀπηλλάγημεν, ἀλλὰ καὶ συνελθόντες πόλεις ᾠκίσαμεν καὶ νόμους ἐθέμεθα καὶ τέχνας εὕρομεν, καὶ σχεδὸν ἅπαντα τὰ δι' ἡμῶν μεμηχανημένα λόγος ἡμῖν ἐστιν ὁ συγκατασκευάσας.
> *CP* I.16.2 πρὸς ὃ δὴ καὶ ἡ γεωργία μεμηχάναται, κωλύουσα τὴν τούτων (of the fruit proper) αὔξησιν καὶ τροφήν.

In technical contexts the μηχαναί involved are solutions to some problem confronting mankind:

> Ps.-Arist. *Mech.* 847 a 13-9 ἐν πολλοῖς γὰρ ἡ φύσις ὑπεναντίον πρὸς τὸ χρήσιμον ἡμῖν ποιεῖ· ἡ μὲν γὰρ φύσις ἀεὶ τὸν αὐτὸν ἔχει τρόπον καὶ ἁπλῶς, τὸ δὲ χρήσιμον μεταβάλλει πολλαχῶς. ὅταν οὖν δέῃ τι παρὰ φύσιν πρᾶξαι, διὰ τὸ χαλεπὸν ἀπορίαν παρέχει καὶ δεῖται τέχνης. διὸ καὶ καλοῦμεν τῆς τέχνης τὸ πρὸς τὰς τοιαύτας ἀπορίας βοηθοῦν μέρος μηχανήν.

In Aristotle we often find nature in the role of the contriver:

> Arist. *PA* 675 b 11-3 πάντα δὲ ταῦτα μεμηχάνηται τῇ φύσει πρὸς τὰς ἁρμοττούσας ἐργασίας περὶ τὴν τροφὴν καὶ τοῦ γινομένου περιττώματος. Also 664 b 32.
> *GA* 745 a 31 διὸ καὶ τοῦτο εὖ μεμηχάνηται πρὸς τὸ συμβαῖνον ἡ φύσις· συνάγει γὰρ εἰς τὸ γῆρας καὶ τὴν τελευτὴν τὴν ὑπόλειψιν τῶν ὀδόντων. Also 717 a 29-30.

H.l. the use of the word seems to reflect a conception of the mathematicals as invented by man in order to make account for, or even to deal with, the objects of perception. This conception is clearly at odds with the high valuation by the philosophers Th. is taking issue with.

The view which Th. opposes appears in

> Speusippus Fr. 28, 140.9 ff. Tarán (= Ps.-Iambl. *Theol. arithm.* 82.20; Philol. A 13, I.400.30-4 DK)[3] μετὰ ταῦτα λοιπὸν θάτερον τὸ τοῦ βιβλίου ἥμισυ περὶ δεκάδος ἄντικρυς ποιεῖται (sc. Speusippus) φυσικωτάτην αὐτὴν ἀποφαίνων καὶ τελεστικωτάτην τῶν ὄντων, οἷον εἶδός τι τοῖς κοσμικοῖς ἀποτελέσμασι

[1] To this extent, Th. seems to imply, they might in fact be considered as secondary to the physical objects of which they are supposed to be the principles.

[2] For this value of οἷον see *ad* 4 a 10.

[3] The reference is taken from THEILER (1958) 102 n. 59.

τεχνικόν, ἐφ' ἑαυτῆς ἀλλ' *οὐχ ἡμῶν νομισάντων ἢ ὡς ἔτυχε θεμένων*[1] ὑπάρχουσαν καὶ παράδειγμα παντελέστατον τῷ τοῦ παντὸς ποιητῇ θεῷ προεκκειμένην.

σχήματά τε καὶ μορφὰς καὶ λόγους περιτιθέντων: "as we invest <things> with figures, shapes, and proportions". The implied dative object (or, patient) is not specified; this lends a general character to the statement, and in any case τοῖς αἰσθητοῖς is easily supplied from the context. For the present use of the verb, compare

CP VI.1.6 Δημόκριτος δέ, σχῆμα περιτιθεὶς ἑκαστῷ, γλυκὺν μὲν τὸν στρογγύλον καὶ εὐμεγέθη ποιεῖ· ...,

and without a human agent

Arist. *Cael.* 285 b 3 ἀλλὰ (δεῖ) νοεῖν ὥσπερ ἂν εἴ τις, ἐν οἷς ἔχει τὸ δεξιὸν πρὸς τὸ ἀριστερὸν διαφορὰν καὶ τοῖς σχήμασιν, εἶτα περιθείη σφαῖραν. ("We must suppose it (i.e. the world) to resemble a being of the class whose right differs from their left in shape as well as in function, but which has been enclosed in a sphere" tr. GUTHRIE)· ἕξει μὲν γὰρ τὴν δύναμιν διαφέρουσαν, δόξει δ' οὐ διὰ τὴν ὁμοιότητα τοῦ σχήματος.

Here again the supposed parallel between nature and human invention is relevant (see *ad* μεχηχανημένα above):

Arist. *PA* 685 a 8 τοῖς δὲ σκληρὸν περὶ τὸ σαρκῶδες περιέθηκεν ἡ φύσις, ὅπως σώζηται διὰ τὴν δυσκινησίαν· ...

683 b 10-1 ἀλλ' ἡ φύσις πρὸς σωτηρίαν αὐτοῖς τὴν τῶν ὀστράκων σκληρότητα περιέθηκεν.

σχήματά τε καὶ μορφάς: of the two σχῆμα is the more complex notion. The term may refer to form *plus* matter,[2] whereas μορφή is form as complementary to matter. Compare e.g.

Arist. *PA* 640 b 34 καίτοι καὶ τὸ τεθνεὼς ἔχει τὴν αὐτὴν τοῦ σχήματος μορφήν, ἀλλ' ὅμως οὐκ ἔστιν ἄνθρωπος.[3]

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[1] The reading of Tarán's text; DK read ἀφ' ἑαυτῆς (ἀλλ' οὐχ ἡμῶν νομισάντων ἢ ὡς ἔτυχε) θεμέλιον ὑπάρχουσαν κ.τ.λ. For οὐχ ἡμῶν ... θεμένων as opposed to 'by nature' TARÁN refers to Nicomachus *Intr. Arith.* 50.21-2 φυσικῶς καὶ οὐχ ἡμῶν θεμένων, and 109.16 φύσει, ἀλλ' οὐχ ἡμῶν θεμένων, (1981) 272 *ad loc.*

[2] Which in this case could be only 'noetic' matter: see below.

[3] "but ἐν μορφῇ θεοῦ ὑπάρχων, opp. σχήματι εὑρεθεὶς ὡς ἄνθρωπος, *Ep. Phil.* 2.6 and 8", LSJ s.v. σχῆμα. In Christian contexts the use of σχῆμα with reference to God is, of course, inappropriate.

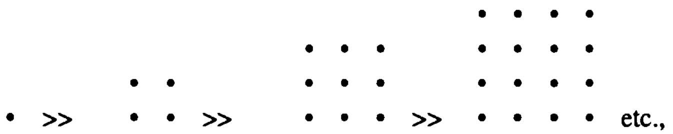
In expressions such as Eur. *Ion* 992 ποῖόν τι μορφῆς σχῆμ' ἔχουσαν ἀγρίας; / [ ] θώρακ' ἐχίδνης περιβόλοις ὡπλισμένον, Eur. *IT* 292 παρῆν δ' ὁρᾶν / οὐ ταῦτα μορφῆς σχήματ',

CP VI.17.11 ἐπεὶ τά γε σχήματα Δημοκρίτου (καθάπερ ἐλέχθη), τεταγμένας ἔχοντα τὰς μορφάς, τεταγμένα καὶ τὰ πάθη καὶ τὰς αἰσθήσεις ἐχρῆν ποιεῖν. (cp. 11 b 22).

For **λόγος** as the arithmetical ratio ascribed to the things of nature compare

Arist. *Met.* 991 b 13-21 εἰ δ' (sc. εἰσὶν ἀριθμοὶ τὰ εἴδη) ὅτι λόγοι ἀριθμῶν τἀνταῦθα, οἷον ἡ συμφωνία, δῆλον ὅτι ἐστὶν ἕν γέ τι ὧν εἰσὶ λόγοι. εἰ δή τι τοῦτο, ἡ ὕλη, φανερὸν ὅτι καὶ αὐτοὶ οἱ ἀριθμοὶ λόγοι τινὲς ἔσονται ἑτέρου πρὸς ἕτερον. λέγω δ' οἷον, εἰ ἔστιν ὁ Καλλίας λόγος ἐν ἀριθμοῖς πυρὸς καὶ γῆς καὶ ὕδατος καὶ ἀέρος, καὶ ἄλλων τινῶν ὑποκειμένων ἔσται καὶ ἡ ἰδέα ἀριθμός· καὶ αὐτάνθρωπος, εἴτ' ἀριθμός τις ὢν εἴτε μή, ὅμως ἔσται λόγος ἐν ἀριθμοῖς τινῶν καὶ οὐκ ἀριθμός, οὐδ' ἔσται τις ⟨ἰδέα⟩ διὰ ταῦτα ἀριθμός. ("But if it is because things in this sensible world (e.g. harmony) are ratios of numbers, evidently there is some one class of things of which they are ratios. If, then, this—the matter—is some definite thing, evidently the numbers themselves too will be ratios of something to something else. E.g. if Callias is a numerical ratio between fire and earth and water and air, his Idea also will be a number of certain other underlying things; and the Idea of man, whether it is a number in a sense or not, will still be a numerical ratio of certain things and not a number proper, nor will it be a number merely because it is a numerical ratio." (*RevOT*).

At first sight the literal interpretation of περιτιθέναι as yielding a 'surrounding' things with mathematical entities[1] does not sit well on λόγους;[2] cp. however Arist. *Phys.* 203 a 13 περιτιθεμένων γὰρ τῶν γνωμόνων περὶ τὸ ἕν, referring to a device for multiplication which always produces a square:



i.e. by 'placing around' the number one the carpenter's tool shaped └ called γνώμων, which is used for constructing a right angle:[3] see Wicksteed/Cornford *ad loc.*

ἀλλ' ἠλλάσσετο again μορφή seems to be the more limited term, referring to the appearance of a σχῆμα.

[1] Contrast 7 a 20 τοὺς λόγους ἑκάστοις περιθεῖναι "to assign a formal account to", where λόγοι is used in a non-mathematical sense.

[2] The reference cannot be to the practice of filling up the contours of things with pebbles to represent the number which is supposed to constitute the essence of a thing (see the story about Eurytus, 6 a 19-22), since the 'surrounding' involved h.l. is an activity of the human *mind*.

[3] Cp. Barbotin (1954) 85: "L'auteur semble se représenter ici les notions mathématiques comme une sorte de vêtement dont l'esprit enveloppe (περιτιθέντων) les choses sensibles.

But whether the verb is given a more literal or a more metaphorical interpretation[1] does not affect the unfitness of the mathematicals for the role of the νοητά which we are looking for.

δοκεῖ ... εἶναι, ... αὐτὰ δὲ ... **ἔχει**: ἔχειν B, adopted by R-F. There is, however, no need to smooth over the slight irregularity or rather asymmetry:[2] the finite verb conveys that Th. accepts responsibility for denying the mathematicals a nature and reality of their own, whereas the qualification of them as 'contrived' was only a manner of speaking. Cp. 7 a 1-3 φαίνεται ... ἔχειν ... · συνακολουθεῖ[3] δέ ... and

Lap. 69 δοκεῖ γὰρ θερμότατον εἶναι πυρωθὲν καὶ πλεῖστον χρόνον διαμένει ("For once it has been kindled, ox-dung seems to be extremely hot and lasts for a very long time" tr. EICHHOLZ).

δέ introduces αὐτὰ ... δι' αὐτῶν as a new item after what the things in question appear to be through our intervention (δι' ἡμῶν). **δι' αὐτῶν** "through, in virtue of themselves" balances δι' ἡμῶν, and αὐτὰ δι' αὐτῶν may be conceived as a dynamic counterpart to the expression, used in ontological and epistemological contexts, αὐτὰ καθ' αὑτά "(the things) themselves (as existing and known) in and by themselves"; compare

Dem. XLVIII.15 καὶ τὸ ἀργύριον τοῦτο ἅπαν εἶχεν αὐτὸς δι' ἑαυτοῦ ὁ ἄνθρωπος.

Plato *Polit.* 274 A 3 – B 1 οὐ γὰρ ἐξῆν ἔτ' ἐν γῇ *δι' ἑτέρων* συνιστάντων φύεσθαι ζῷον, ἀλλὰ καθάπερ τῷ κόσμῳ προσετέτακτο αὐτοκράτορα εἶναι τῆς αὐτοῦ πορείας, οὕτω δὴ κατὰ ταὐτὰ καὶ τοῖς μέρεσιν *αὐτοῖς δι' αὐτῶν*, καθ' ὅσον οἷόν τ' ἦν, φύειν τε καὶ γεννᾶν καὶ τρέφειν προσετάττετο ὑπὸ τῆς ὁμοίας ἀγωγῆς.

More frequently without αὐτός:

Arist. *Cael.* 290 a 11 εἴπερ οὖν κινοῖτο τὰ ἄστρα δι' αὐτῶν, τὴν ἑτέραν ἂν κινοῖτο τούτων (i.e., κύλησις καὶ δίνησις) · ἀλλ' οὐδετέραν φαίνεται.

L'ἀφαίρεσις évoque plutôt l'opération inverse: l'extraction du concept immergé dans la chose. Au vrai, ce n'est là qu'une question de point de vue; les deux métaphores contraires expriment la même doctrine: les concepts mathématiques sont essentiellement des constructions de la pensée, auxquelles le monde sensible ne fournit qu'un point de départ ou un soutien.".

[1] "bestow, confer upon", LSJ s.v.

[2] Cp. L-M *ad loc.*, referring to 7 a 3, 11 a 9: "la parataxe semble caractéristique de la manière de Théophraste dans l'opuscule.".
Additional inducements for reading ἔχειν might be provided by USENER's conjecture of οὕτως γε for ὥστε in 4 b 3 (but see note *ad loc.*), and by a wish to adapt the sentence to the putative 'aporetic' character of the text.

[3] συνακολουθεῖν USENER (1890).

Pol. 1293 a 28 ἡ τρίτη ἐπίδοσις γίνεται τῆς ὀλιγαρχίας, τὸ δι' αὐτῶν μὲν τὰς ἀρχὰς ἔχειν, κατὰ νόμον δὲ τὸν κελεύοντα τῶν τελευτώντων διαδέχεσθαι τοὺς υἱεῖς.

DA 412 a 14-5 ζωὴν δὲ λέγομεν τὴν δι' αὐτοῦ τροφήν τε καὶ αὔξησιν καὶ φθίσιν.

For mathematicals as devoid of φύσις (**οὐδεμίαν ... φύσιν**) compare

Ps.-Arist. *Lin. insec.* 968 b 20-1 (on γραμμαί) ἀλλὰ καθ' αὐτὰς μὲν οὐδέ τινας ἕξουσι φύσεις, πρὸς ἀλλήλας δὲ ἔσονται ῥηταὶ καὶ ἄλογοι.

For φύσις as equivalent to οὐσία cp. εἰς τὴν τοῦ παντὸς φύσιν, 8 b 8 below and *ad* 4 a 17 above. H.l. two aspects of the term are relevant: (1) the mathematicals seem to owe their shape—and thereby their essence—entirely to human invention (see *ad* σχήματά τε καὶ μορφὰς καὶ λόγους περιτιθέντων above), and (2) their lack of an independent φύσις implies the lack of a principle of movement, hence of any purpose. The subsequent reservation εἰ δὲ μή, οὐχ ὥστε ... concerns (2).[1]

In denying to mathematicals an existence independent of the mind Th. seems to agree, to some extent at least, with Aristotle, who even considered the possibility that they have no existence at all:

Arist. *Met.* 1077 b 14-7 ἐπεὶ δ' οὐδ' ἐν τοῖς αἰσθητοῖς ἐνδέχετο αὐτὰ εἶναι (sc. τὰ μαθηματικά), φανερὸν ὅτι *ἢ ὅλως οὐκ ἔστιν* ἢ τρόπον τινὰ ἔστι καὶ διὰ τοῦτο οὐχ ἁπλῶς ἔστιν· πολλαχῶς γὰρ τὸ εἶναι λέγομεν.,[2]

but settled for conceiving of them as 'abstractions'

Met. 1061 a 28-9 ὁ μαθηματικὸς περὶ τὰ ἐξ ἀφαιρέσεως τὴν θεωρίαν ποιεῖται

and denying them οὐσία, the objects of astronomy excepted:[3]

Met. 1073 a 5-8 (ἡ ἀστρολογία) περὶ οὐσίας αἰσθητῆς μὲν ἀϊδίου δὲ ποιεῖται τὴν θεωρίαν, αἱ δ' ἄλλαι (sc. τῶν μαθηματικῶν ἐπιστημῶν) περὶ οὐδεμιᾶς οὐσίας, οἷον ἥ τε περὶ τοὺς ἀριθμοὺς καὶ τὴν γεωμετρίαν.

Aristotle, then, did not deny them existence altogether:

Met. 1078 a 25-31 ὁ δὲ γεωμέτρης οὔθ' ᾗ ἄνθρωπος (sc. ἐθεώρησεν) οὔθ' ᾗ ἀδιαίρετος ἀλλ' ᾗ στερεόν. ἃ γὰρ κἂν εἰ μή που ἦν ἀδιαίρετος ὑπῆρχεν αὐτῷ, δῆλον ὅτι καὶ ἄνευ τούτων ἐνδέχεται αὐτῷ ὑπάρχειν, ὥστε διὰ τοῦτο ὀρθῶς οἱ γεωμέτραι λέγουσι, καὶ περὶ ὄντων διαλέγονται, καὶ ὄντα ἐστίν· διττὸν γὰρ τὸ ὄν, τὸ μὲν ἐντελεχείᾳ τὸ δ' ὑλικῶς.

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[1] See *ad* 4 b 2-4.

[2] Cp. Arist. *Met.* 1044 b 22 οἷον αἱ στιγμαί, εἴπερ εἰσί, ...

[3] At *Phys.* 194 a 7-12 Aristotle argues that astronomy, like optics and harmonics, should be regarded as a branch of physics rather than of mathematics. See Ross *ad loc.*

Whatever the details of Aristotle's conception of the mathematicals as founded in extramental reality (i.e. as ὕλη νοητή, *Met.* 1036 a 11),[1] it is clear that in his view the mind is not to be held solely responsible for their existence.[2]

The terminology of the present passage[3] suggests that for Th., too, mathematical objects are not independent of the human mind. Their mode of being may to some extent be expressed in terms of a τέχνη, in particular a ποιητική τέχνη: by speaking of mathematicals not as abstractions but as some sort of additions made by us, Th. emphasizes their lack of a connection with the objects of sense.[4]

Th. does not push the craft-analogy quite so far as to introduce a concept of noetic matter. He has no need to, given the critical nature of the passage, which serves to rule the mathematicals out as principles. Still, it is worth noting that he might have done so without inconsistency, since he argues that εἶναι may be predicated of matter, even if οὐσία, which is equivalent to φύσιν in our passage, may not: see Ch. VI, 8 a 11 ff. It may be that his conception of matter as endowed with a δύναμις which is an active power, rather than a mere potentiality, made him reluctant to invoke a concept of noetic matter. But whether we attribute 'matter' to mathematicals or not does not affect their unfitness to serve as principles of nature.

4 b 2-4 εἰ δὲ μή, ... αὐτοῖς·

οὐχ ὥστε PJCLA; οὐχ οὕτως γε USENER (1890); οὐχ οἷον τε A² "et (ut vid.) Isḥāq" L-M *app. crit. ad loc.*; οὐδ' ὡς USENER (1861) 264; οὐχ οἷά τε Hoffmann *apud* USENER (1861) 264.[5]

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[1] Where see Ross.

[2] See MUELLER (1970) 169 "there is no good reason to suppose that Aristotle thought of intelligible matter as mental or imagined"; cp. ANNAS (1976) 151: "The mathematician's activity, when thinking of mathematical objects, is taken to be genuinely constructive and to be a kind of working on materials. Mathematical objects do not exist already for him to find, but neither does he create them *ex nihilo*; his thinking is constructive but has something to work on. This might be expressed by saying that the mathematical objects themselves have only the kind of existence appropriate to matter. Independently of the mathematician they exist only as the statue may be said to exist in the block of marble before the sculptor gets to work on it."

[3] See *ad* μεμηχανημένα and περιτιθέντων above.

[4] It may be noted that in *Phys.* 193 b 32 – 194 a 1 Aristotle describes the process of abstraction in terms of χωρίζειν: οὐδὲ τὰ συμβεβηκότα θεωρεῖ (sc. ὁ μαθηματικός) ᾗ τοιούτος οὖσι συμβέβηκεν· διὸ καὶ χωρίζει· χωριστὰ γὰρ τῇ νοήσει κινήσεώς ἐστι, καὶ οὐδὲν διαφέρει, οὐδὲ γίγνεται ψεῦδος χωριζόντων. ("That is why he separates them; for in thought they are separable from motions, and it makes no difference, nor does any falsity result, if they are separated.", *RevOT.* On this analogy Th. does not allow so much as a genetic relation.

[5] "aber mein Freund Dr. W. Hoffmann hat das Richtige gefunden", USENER *l.c.*

εἰ δὲ μή 'and if not', i.e. presumably "and if it is not the case that they have no nature whatsoever";[1] compare

Arist. *Met.* 994 b 28 καὶ ἀπείρῳ οὐδενὶ ἔστιν εἶναι· εἰ δὲ μή, οὐκ ἄπειρόν γ' ἐστὶ τὸ ἀπείρῳ εἶναι.[2]
CP III.4.2 καὶ τοὺς γύρους οὐκ εὐθὺς συμπληροῦσιν, ὅπως ῥιζωθῇ τὰ κάτω πρότερον· εἰ δὲ μή, φέρονται πρὸς τὰ ἄνω (...).

(οὐχ) **ὥστε**, then, defines negatively the φύσις implied by the double negative which is the hypothetical denial of their having οὐδεμίαν φύσιν: if they *have* some φύσις, "it is (one) not so as to ...".[3] Compare

Ign. 4 οὔτε γὰρ ἁπλοῦν οὕτω γε (sc. τὸ πῦρ) οὔτε πρότερον τοῦ ὑποκειμένου καὶ τῆς ὕλης, εἰ μή τις ἐν αὐτῇ τῇ πρώτῃ σφαίρᾳ τοιαύτη φύσις, ὥστε ἄμικτον εἶναι θερμότητα καὶ καθαράν.
CP VI.12.10 εἰ δέ τις τῶν δένδρων (καὶ ὅλως τῶν ὑλημάτων) τοιαύτη φύσις ἐστὶν ὥστε τοὺς μὲν ἀμίκτους ποιεῖν, ἔχοντας τὴν οἰκείαν δύναμιν καθαράν, κ.τ.λ.
Vent. 26 τῶν δ' ἀπογείων πνευμάτων ἀσθενὴς ἡ φύσις ὥστ' οὐ δύνασθαι βιάζεσθαι πόρρω.[4]

Although one ὥστε depending on another one (see ὥστ' ἐμποιῆσαι, 4 b 3) may not be a construction regularly found in more polished prose compositions, this is not a reason to doubt the manuscript tradition, which is practically unanimous: see L-M, *app. crit.*

R-F and L-M adopt Usener's conjecture οὕτως γε. It should be noted that this conjecture presupposes the conjecture ἔχειν for ἔχει 4 b 2, *q.v.* It is true that εἰ δὲ μή is not infrequently followed by (...) γε;[5] moreover the conjecture has been credited with the support of Barthelomey's translation "ipsa autem per se ipsa nullam habent naturam si autem non. non sicut copulare eis que sunt nature ut fac sicut vita et motus ipsa", cp. KLEY *ad loc.*: "Useners Emendation des überlieferten ὥστε in οὕτως γε wird gerechtfertigt, da B. ὥστε mit *quare* wiederzugeben pflegt." However, both the transmission of the Latin text and Barthelomey's Greek are obviously defective, as KLEY himself points out *ad* "fac sicut vita et motus".

In view of this, the conjecture of οὐχ οἷά τε (see above) might seem preferable. It appears to be favoured by the Arabic translation.[6] An at least partial parallel would be

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[1] Without a preceding negation e.g. *CP* III.5.2 ὀρθῶς δὲ καὶ τὸ μᾶλλον ἐξ ὁμοίας γῆς, εἰ δὲ μή, χείρονος λαμβάνειν· ... ; [Th.] *Sign.* 8 μεταβάλλει γὰρ ὡς ἐπὶ τὸ πολὺ ἐν τῇ τετράδι, ἐὰν δὲ μή, ἐν τῇ ὀγδόῃ, εἰ δὲ μή, πανσελήνῳ· ...

[2] See also 1075 b 27 quoted p. 114 below.

[3] Cp. HINDENLANG (1910) 74-6.

[4] Cp., without φύσις, *Vent.* 8: κοίλη ... ὥσθ' ὑπερπίπτειν.

[5] E.g. *Ign.* 3; *CP* VI.1.1, VII.10.2; Arist. *Met.* 994 b 27 (quoted above).

[6] MARGOLIOUTH (1892) 195 "And if they have no permanent nature"; ALON (1985) 206 "If

Ps.-Arist. *Lin. insec.* 969 b 23-5 καὶ ὅσα ἄλλα τοιαῦτα τεθεώρηται περὶ τὰς γραμμὰς μὴ οἷόν τε ἐνδέχεσθαι τοιαύτην δή τινα γενέσθαι κίνησιν, ὥστ' ἐφ' ἕκαστον τῶν μεταξὺ μὴ πίπτειν πρότερον. ("... that it cannot be that such a movement may occur without this one touching upon each of the intermediate (points) <of the circle in question?> first").

This conjecture, however, gives rise to more questions than the reading transmitted; on the supposition that τὰ μαθηματικά constitutes the grammatical subject involved, συνάπτειν is most likely to be intransitive ("to be connected with"), which is somewhat awkward with ... ὥστ' ἐμποιῆσαι κ.τ.λ. ("so as to produce ..."): cp. the Arabic translation "so that ... be created in them".

All things considered, the repetition of ὥστε does not call for emendation.

If the mathematical objects *do* have a φύσις—and so are independent entities after all—, they are still not fit to serve as a moving cause, which, given that the things of nature are in movement according to their essence, is the first requirement for a principle: see 4 b 18-22.

The interpretation of the second ὥστε (**ὥστ'** ἐμποιῆσαι) is more problematic. The use of ὥστε + infinitive[1] by itself does not distinguish between (a) a consequence *tout court* and (b) a consequence tied to a condition—the latter sometimes specified by a demonstrative (e.g. οὗτος, τοιοῦτος, τοσοῦτος). With the first ὥστε, in ⟨ἡ φύσις⟩ οὐχ ὥστε ..., what is meant is clearly that the φύσις of the mathematicals—if indeed they have any φύσις—is not *qualified* to connect with the physical objects, i.e. an instance of (b). The second, in συνάπτειν ... ὥστε might be interpreted either as an instance of (a) or as an instance of (b): Th. might be arguing (a) that there is not in the hypothetical nature of the mathematicals any connection with physical objects, and thus no capacity to produce life and movement:[2] e.g.

Arist. *GA* 768 b 30-3 διὰ πλῆθος γὰρ τροφῆς οὐ δυναμένης τῆς φύσεως κρατεῖν ὥστ' ἀνάλογον αὔξειν καὶ διαμένειν ὁμοίαν τὴν τροφήν, ἀλλοῖα γίγνεται μέρη καὶ σχέδον ἐνίοθ' οὕτως ὥστε μηθὲν ἐοικέναι τῷ πρότερον.

Insomn. 462 b 3-9 τὸ δ' αἴτιον τοῦ μὴ γίνεσθαι παραπλήσιόν τι δεῖ νομίζειν, ὅτι οὐδὲ μετὰ τὴν τροφὴν καθυπνώσασιν οὐδὲ τοῖς παιδίοις γίνεται ἐνύπνιον· ὅσοις γὰρ τοῦτον τὸν τρόπον συνέστηκεν ἡ φύσις ὥστε πολλὴν

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they have no real nature, it is impossible for them to be connected with natural things so that ... be created in them", though the translator's way of dealing with εἰ δὲ μή (see ALON's commentary, 184 *ad loc.*: "The sense of the Arabic sentence is diagonally opposed to that of the Greek. (...) The conclusion drawn from the Greek text is reasonable whereas that in the Arabic wants an explanation.") should warn us against putting too much faith in this source.

[1] According to HINDENLANG in Th. the use of the infinitive after ὥστε is predominant, "sodass Theophrast auch hier die Eigentümlichkeiten der κοινή aufweist", (1910) 71.

[2] Cp. HINDENLANG (1910) 75-6 ὥστε "Nach Ausdrücken des Bewirkens".

προσπίπτειν ἀναθυμίασιν πρὸς τὸν ἄνω τόπον ..., εὐλόγως τούτοις οὐδὲν φαίνεται φάντασμα.

CP V.12.4 τὰ μὲν οὖν γινόμενα ταῦτ' ἐστίν· ἡ δ' αἰτία σχεδὸν (ὡς καθόλου γε εἰπεῖν) φανερά· τὸ γὰρ θερμόν, ἐξελαυνόμενον ὑπὸ τοῦ ψύχους, συνεξάγει καὶ τὸ ὑγρόν, ὥστε διαπνεῖσθαι.

VI.13.2 τὰς δ' αἰτίας καὶ τούτων ἐν τοῖς εἰρημένοις ἀνασκεπτέον. ἑκάστου γὰρ ἰδία κρᾶσις οὖσα καὶ φύσις, διαφόρους ποιεῖ καὶ τὰς δυνάμεις, ὥστε τὰ μὲν συντήκειν καὶ διακρίνειν, τὰ δὲ μή, καὶ τὰ μὲν μᾶλλον, τὰ δ' ἧττον· καὶ θερμαίνειν τε καὶ πέττειν, καὶ ψύχειν, καὶ ξηραίνειν, καὶ τἆλλα ὡσαύτως.

Lap. 49 πρὸς ... τῷ τήκεσθαι καὶ μίγνυσθαι καὶ δύναμιν ἔχει περιττὴν ὥστε τῷ κάλλει τῆς χρόας ποιεῖν διαφοράν. ("for [earth which is mixed with copper] not merely melts and mingles with the metal, but also has a remarkable power of enhancing the beauty of its colour" tr. EICHHOLZ).

Or he might be arguing (b) that there is a connection, but not such as to produce life & motion; compare

CP I.11.8 προσεπειπεῖν ... δεῖ καὶ διὰ τί τοσαύτην λαμβάνει καὶ δύναται πέττειν ὥστε γεννᾶν ("why the tree takes in and can concoct so much food that it keeps producing fruit" tr. EINARSON/LINK),
and the second ὥστε in Arist. *GA* 768 b 30-3 quoted above.

Both of these claims would make sense: with (a), *all* συναφή with the physical objects is denied to the mathematicals, which implies that they cannot serve as their moving cause; with (b), though they might show some connection, the particular συναφή required for operating as a moving cause is denied to them; cp. Arist. *Met.* 1075 b 27-8 εἰ δ' ἔσται τὰ εἴδη ἢ ⟨οἱ⟩ ἀριθμοί, οὐδενὸς αἴτια· εἰ δὲ μή, οὔτι κινήσεώς γε.

An interpreation of our passage as involving (b), however, is favoured by the aspectual use of the infinitives: in the sequence συνάπτειν ... ὥστ' ἐμποιῆσαι the aorist infinitive of **ἐμποιῆσαι** has focus function.[1] It should be remembered, however, that on either reading the situation referred to is a hypothetical one: Th. is arguing that, even if the most radical disqualification of the mathematicals (οἷον ... μεμηχανημένα ... φύσιν 4 a 21 – b 2) should not apply, they would still fail to meet the requirements for principles of nature. For ἐμποιεῖν compare

Democr. B 191, I.184.5-7 DK τὰ δ' ἐλλείποντα καὶ ὑπερβάλλοντα μεταπίπτειν τε φιλεῖ καὶ μεγάλας κινήσιας ἐμποιεῖν τῇ ψυχῇ.

Arist. *Phys.* 250 b 26 φησὶν γὰρ ('Αναξαγόρας), ὁμοῦ πάντων ὄντων καὶ ἠρεμούντων τὸν ἄπειρον χρόνον, κίνησιν ἐμποιῆσαι τὸν νοῦν καὶ διακρῖναι.

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[1] See SICKING (1991) 27 ff.

Sens. 55 εἰς γὰρ τὸ κενὸν (the aural cavity) ἐμπίπτοντα τὸν ἀέρα κίνησιν ἐμποιεῖν, ...

With **καθάπερ** the author waives any claim to precision,[1] and indeed **ζωὴν καὶ κίνησιν** is pleonastic, considering that ζωή implies κίνησις, even though not all κίνησις implies ζωή.[2] Compare

Arist. *DA* 413 a 22-5 πλεοναχῶς δὲ τοῦ ζῆν λεγομένου, κἂν ἕν τι τούτων ἐνυπάρχῃ μόνον, ζῆν αὐτό φαμεν, οἷον νοῦς, αἴσθησις, κίνησις καὶ στάσις ἡ κατὰ τόπον, ἔτι κίνησις ἡ κατὰ τροφὴν καὶ φθίσις τε καὶ αὔξησις.

The lack of precision may be intentional, suggesting the fullness and complexity of that condition of which it is claimed that the mathematicals are unlikely to impart it to the things of nature: a condition comprising both the orderly movement of the heavenly bodies and the life of organic nature. "If it is not true that they have no reality, it (i.e. their suppositious reality) is not such as to connect with the things of nature in such a way as to produce in them things like life and movement."

In his criticism of Pythagorean philosophy Aristotle likewise points out the inadequacy of mathematical entities for serving as a moving cause:

Arist. *Met.* 990 a 8-12 ἐκ τίνος μέντοι τρόπου κίνησις ἔσται πέρατος καὶ ἀπείρου μόνων ὑποκειμένων καὶ περιττοῦ καὶ ἀρτίου, οὐθὲν λέγουσιν, ἢ πῶς δυνατὸν ἄνευ κινήσεως καὶ μεταβολῆς γένεσιν εἶναι καὶ φθορὰν ἢ τὰ τῶν φερομένων ἔργα κατὰ τὸν οὐρανόν.

1092 b 23-5 (against certain ideas held in Academic circles) οὔτε οὖν τῷ ποιῆσαι αἴτιος ὁ ἀριθμός, οὔτε ὅλως ὁ ἀριθμὸς οὔτε ὁ μοναδικός, οὔτε ὕλη οὔτε λόγος καὶ εἶδος τῶν πραγμάτων. ἀλλὰ μὴν οὐδ' ὡς τὸ οὗ ἕνεκα.

See also *Met.* 1075 b 27-8 quoted above; 1090 b 13-20, *ad* ἐπεισοδιῶδες 4 a 14, p. 94 above.

4 b 4-5 οὐδὲ γὰρ ... τιθέασιν.

οὐδὲ **γάρ** introduces an argument according to the topic a fortiori or ἀπὸ τοῦ μᾶλλον, defined by Arist. *Rhet.* 1397 b 13-4: εἰ ᾧ μᾶλλον ἂν ὑπάρχοι μὴ ὑπάρχει, δῆλον ὅτι οὐδ' ᾧ ἧττον.[3] For the primacy of number among the

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[1] Cp. 11 b 2.

[2] See 5 b 3-4.—L-M connect καθάπερ with ζωή only: "La vie est aux animaux ce que le mouvement est à la nature, et les objets mathématiques sont réputés incapables d'expliquer cette quasi-vie qu'est déjà le simple mouvement" (*ad loc.*, with a reference to Arist. *Phys.* 250 b 14 f. (κίνησις) οἷον ζωή τις οὖσα τοῖς φύσει συνεστῶσι πᾶσιν).

[3] For a discussion of ancient testimony to the effect that Th. transformed this τόπος into a hypothetical syllogism, see Graeser (1973) 93-4.

mathematical entities see Arist. *Met.* 985 b 26-7 τούτων (sc. of the alleged mathematical principles) οἱ ἀριθμοὶ φύσει πρῶτοι—what is less complex being ontologically and epistemologically prior to what is more complex:

> Arist. *Met.* 982 a 26-7 (of ἐπιστῆμαι) αἱ γὰρ ἐξ ἐλαττόνων ἀκριβέστεραι τῶν ἐκ προσθέσεως λεγομένων, οἷον ἀριθμητικὴ γεωμετρίας· ...

See also *Protr.* B 36 D., quoted *ad* ὡρισμένη 4 a 6, p. 79 above.

This priority seems to be implicit in the expression **αὐτὸς ὁ** (ἀριθμός)—a phrase frequently used by Th. to indicate a shift of focus towards something considered as somehow primary or asking for particular comment; in our treatise in πρὸς αὐτὸν τὸν πρῶτον οὐρανὸν ἀναφέρων 6 a 6; ὑπὲρ αὐτῆς τῆς κινήσεως ἀπορεῖν 6 a 13; ἐπ' αὐτὸν ... τὸν νοῦν καὶ τὸν θεόν 7 b 22-3; αὐτὰ τὰ μαθήματα 9 a 17; ἐπ' αὐτὰ τὰ ἄκρα καὶ πρῶτα 9 b 10; ἐν αὐτοῖς τοῖς ζῴοις 10 b 7; αὐτῶν τῶν ἐμψύχων 11 a 17, i.e. eight instances in *Met.* alone, not counting αὐτὸ τὸ ... περιθεῖναι at 7 a 20, or ἐν αὐτῇ τῇ γῇ 10 b 4, where the text is uncertain.[1] Cp. also αὐτὸ γὰρ τοῦτο ἄπορον 10 b 24.
In other treatises e.g. αὐτὸ τὸ πολυειδές *Ign.* 9; αὐτὸ τὸ πῦρ *Ign.* 12; αὐτοῖς τοῖς γευστοῖς *Od.* 9; αὐτὸς ὁ βλαστός *HP* I.1.2; αὐτά ... τὰ γεννώμενα I.1.3; αὐτὸν τὸν καρπόν I.1.7; αὐτὰ ... τὰ μέρη I.1.9; also *CP* VI.8.6, below.

The inadequacy of number is significant, since number, as is well-known (**δή**), is precisely (**ὅνπερ**)[2] that mathematical object which 'some' (**τινες**), hold to be primary and supreme, i.e. presumably those who identify the objects of thought with the mathematicals (the τινες of line 4 a 19).[3]

The, more or less agreed, primacy of number among the mathematical objects for these thinkers involves the consequence that number is also the most *powerful* among the mathematicals. Therefore if even this mathematical entity *par excellence* fails to connect with the things of nature so as to provide them with life & movement, the mathematicals as a class cannot possibly be the noetic entities we are looking for.

For **κυριώτατον** "most authoritative", "most decisive", "supreme" in combination with πρῶτα referring to the most powerful (i.c. natural) entity compare

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[1] And not counting αὐτοὶ ⟨οἱ⟩ τοὺς ἀριθμοὺς (sc. λέγοντες) 5 a 27: see note *ad loc.*
Without making any claim to statistic significance or precision: in Arist. *Met.* α and Λ I did not find any occurrences; in *Met.* B only περὶ αὐτῆς τῆς προσφορᾶς 1000 a 14-5; αὐτῆς τῆς μεταβολῆς 1000 b 12-3 (not counting those cases in which a Platonic Form is obviously referred to, as in 997 b 31-2 αὐτὸ τὸ ὑγιεινόν). See also ἀπ' αὐτῶν τῶν πρώτων and ἀπ' αὐτῶν τῶν ἀκριβῶν, Arist. *Protr.* B 48 D., quoted *ad* 4 a 2-3, p. 74 above.

[2] Cp. Bakker (1986) 145-52.

[3] For the Pythagorean tenet of the primacy of number see Arist. *Met.* 985 b 23-8, 1017 b 20; for Speusippus *ibid.* 1075 b 37 – 1076 a 3.

CP I.1.1 ἡ ... φύσις οὐδὲν μὲν ποιεῖ μάτην, ἥκιστα δ' ἐν τοῖς πρώτοις καὶ κυριωτάτοις, πρῶτον δὲ καὶ κυριώτατον τὸ σπέρμα· ...[1] and,

with reference to a hierarchy of principles:

CP VI.8.6 αἴτιον δὲ τό τε νῦν εἰρημένον, ὅτι εἰς τὴν σάρκα ἡ δύναμις, τοῦ βότρυος δ' ὁ χυλὸς ἐν αὐτῇ τῇ σαρκί· καὶ ἔτι πρότερον ἴσως καὶ κυριώτερον, ὅτι ἡ θερμότης ἡ ποιοῦσα τοὔλαιον ἀσθενής·...

143.9 FHS&G ... πειρᾶσθαι χρὴ θεωρεῖν, ἢ τὰ φαινόμενα λαμβάνοντας καθ' αὑτὰ ἢ ἀπὸ τούτων εἴ τινες ἄρα κυριώτεραι καὶ πρότεραι τούτων ἀρχαί.

Implying a hierarchy of sciences:

Arist. *Met.* 997 a 12 ἀλλὰ μὴν εἰ ἑτέρα ἡ τῆς οὐσίας (sc. ἀπόδειξις) καὶ ἡ περὶ τούτων (i.e. τὰ ἀξιώματα), ποτέρα κυριωτέρα καὶ προτέρα πέφυκεν αὐτῶν;

For this extension of the parallel between a science and its objects to the authority it may command cp. 10 a 7.

I.4 (4 b 6-18): *Any candidate which would be better equipped for this task is likely to be numerically one. Its identity should presumably be defined by its being superior to everything else, as when we are trying to establish the nature of God—considering that the principle on which all things depend for their existence is itself divine. Further identification of the principle hereby characterized in relative terms is difficult.*

4 b 6-8 εἰ δ' ἑτέρα τις οὐσία ... κατὰ γένος.

εἰ δ(έ) answers εἰ μέν in 4 a 18: if—as appears to be the case—among the noetic objects the mathematicals are unlikely to constitute the principle of nature, then there is likely to be some other, more powerful entity to qualify as such.

It is to be noted that by his choice of words Th., strictly speaking, implies the mathematicals to be οὐσίαι, this being in apparent contrast to the tenor of the previous paragraph. A way out would be to assume that the present

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[1] Cp. Merlan ([3]1975) 106: "Clearly, Theophrastus makes a distinction between what is undeveloped and what is inferior (or imperfect in the ordinary sense of the word). While the seed is in his opinion the former, it is not the latter. Indeed, the idea that what is undifferentiated and undispersed is higher than the differentiated and spread out, so that the seed is higher than the organism, seems like a rather natural one".

In addition one may refer to cosmological number theories as those which Aristotle attributes to the Pythagoreans and to theories about the generation of magnitudes or physical bodies from numbers expounded in the early Academy, which may show Pythagorean influence: see Philip (1966), Kahn (1974) 171.

sentence is to be connected more particularly with the hypothetical, less absolute disqualification of the mathematicals in εἰ δὲ μή (sc. οὐδεμίαν ἔχει φύσιν) κ.τ.λ.;[1] however, this is unlikely because of the obvious reference of εἰ δ' to εἰ μέν at the beginning of the previous paragraph. It therefore appears to be best to assume a slight inconsistency here, caused by a conflation of two different statements, (a) εἰ δ' ἔστιν ἕτερόν τι (sc. τῶν νοητῶν) πρότερον καὶ κρεῖττον, and (b) εἰ δ' οὐσία τις προτέρα καὶ κρείττων ἐστίν.

This inconsistency is made manifest by the predicative position of **ἐστίν**, which does not agree very well with the thought expressed in statement (a). As a result, the sentence as it stands with ἑτέρα and the predicative use of ἐστίν ("if some other entity is prior to and more powerful than these") to a certain extent fails to express the question concerning the identity of such a principle, which is indicated by the construction εἰ μὲν ... εἰ δέ.[2]

In **προτέρα καὶ κρείττων** we recognize the primacy and the supremacy denied to the mathematicals in οὔθ' ὅλως ἀξιόχρεα φαίνεται τοῦ παντός κ.τ.λ. 4 a 20 ff. and οὐχ ὥστε συνάπτειν κ.τ.λ. 4 b 2 ff.; see also πρῶτον καὶ κυριώτατον in 4 b 5. For the conception that what is prior is also more powerful,[3] compare

Arist. *Phys.* 257 b 16-7 τὸ γὰρ πρότερον αἰτιώτερον τοῦ κινεῖσθαι τοῦ ἐχομένου καὶ κινήσει μᾶλλον.

For this line of reasoning one may compare the following passage concerning the primacy of 'basic' principles:

HP I.2.1 ἄλλα δὲ ἐξ ὧν ταῦτα (sc. τὰ μέγιστα μέρη sc. of plants) φλοιὸς ξύλον μήτρα, ὅσα ἔχει μήτραν. πάντα δ' ὁμοιομερῆ. καὶ τὰ τούτων δὲ ἔτι πρότερα καὶ ἐξ ὧν ταῦτα, ὑγρὸν ἶς φλὲψ σάρξ· ἀρχαὶ γὰρ αὗται· πλὴν εἴ τις λέγοι τὰς τῶν στοιχείων δυνάμεις,[4] αὗται δὲ κοιναὶ πάντων. ἡ μὲν οὖν οὐσία καὶ ἡ ὅλη φύσις ἐν τούτοις.

In view of (our suppositions about) Th.' own ideas on the issue an interesting parallel for this use of κρείττων is

Ps.-Arist. *De Mundo* 397 a 5-6 τίς γὰρ ἂν εἴη φύσις τοῦδε (i.e. τοῦ κόσμου) κρείττων; ἣν γὰρ ἂν εἴποι τις, μέρος ἐστὶν αὐτοῦ.

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[1] See note *ad loc.*
[2] See also *ad* ταύτην, below.
[3] See also *ad* 5 a 1-2.
[4] "unless one should advance the powers of the elements <sc. as being even prior to these>"; *contra* Hort ("unless one should prefer to call them the active principles of the elements") and Amigues ("à moins qu'on ne les appelle les principes de base").

Since the hypothesis that there is an **οὐσία**[1] which *is* powerful enough to stand in a relation of an ἀρχή to the physical objects fits in quite naturally in the course of Th.' efforts to identify τὰ πρῶτα, there is no reason to suppose that the author is referring to the Platonic Ideas, as R-F and TRICOT (*ad loc.*) do.[2]

ταύτην, with a prolepsis not uncalled for by the syntax of the beginning of this sentence (see above), emphatically presents the topic of the present paragraph (and of the rest of the first chapter): "of this entity we should try to say whether ...".

Th. shares with his predecessor a liking for the (often programmatic) use of the 'deontic' neuter of the verbal adjective: **πειρατέον** also in 4 b 12, 9 a 24, 11 b 25; ἀποδοτέον 5 a 10-1; ἀφαιρετέον 5 a 11; ζητητέον 9 b 3, 10 a 17; θετέον 4 b 21, 11 a 3; ληπτέον 8 a 3, 8 a 20, 11 a 2; μεταδιωκτέον 9 a 11; ποιητέον 9 b 19; σκεπτέον 11 b 24.

As distinct from the mathematicals, of which we know, at least, that they are many both in number and in species,[3] in the case of the hypothetical superior entity we necessarily start from zero: we do not even know at which level it is *one*. So, with the question **πότερον μία τις κατ' ἀριθμόν** (or only **κατ' εἶδος**, or only **κατὰ γένος**) Th. characteristically begins at the beginning.
For the Peripatetic[4] modes of being one, see

> Arist. *Met.* 1016 b 31 ff. ἔτι δὲ τὰ μὲν κατ' ἀριθμόν ἐστιν ἕν, τὰ δὲ κατ' εἶδος, τὰ δὲ κατὰ γένος, τὰ δὲ κατ' ἀναλογίαν, ἀριθμῷ μὲν ὧν ἡ ὕλη μία, εἴδει δ' ὧν ὁ λόγος εἷς, γένει δ' ὧν τὸ αὐτὸ σχῆμα τῆς κατηγορίας, κατ' ἀναλογίαν δὲ ὅσα ἔχει ὡς ἄλλο πρὸς ἄλλο. ἀεὶ δὲ τὰ ὕστερα τοῖς ἔμπροσθεν ἀκολουθεῖ, οἷον ὅσα ἀριθμῷ καὶ εἴδει ἕν, ὅσα δ' εἴδει οὐ πάντα ἀριθμῷ· κ.τ.λ.[5]

The question whether the principles are limited in number or in kind is raised in Arist. *Met.* 996 a 1, 999 b 25 ff., 1060 b 29; see also XII.4 & 5, 1070 a 31 ff., XIII.10, 1086 b 14 ff.

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[1] For the rendering of οὐσία as "entity" see OWENS (1978) 138-54.

[2] See also I.6, 5 a 5 ff.

[3] Cp. 9 a 15-8.

[4] For the conjectural Academic origin of the series ἀριθμῷ–εἴδει–γένει–ἀναλογίᾳ see STENZEL (1933) 157 ff., KRAEMER (1968) 299-303. Also Introduction p. 4 n. 1 above.

[5] For the fourth mode of being one (κατ' ἀναλογίαν), which is absent here, see 9 a 6 ff.

4 b 8-11 εὐλογώτερον δ' οὖν ... ἐν τῷ πρώτῳ.

For **εὐλογώτερον δ' οὖν**, see *ad* 4 a 13. Here the plausibility is based upon implicit presuppositions regarding the nature of an ἀρχή in particular: **ἀρχῆς φύσιν** ἐχούσας. For the phrase, cp.

> 307A.15 FHS&G τάχα δ' ἂν φανείη καὶ τοῦτο ἄτοπον, εἰ ὁ νοῦς ὕλης ἔχει φύσιν μηδὲν ὢν ἅπαντα δὲ δυνατός.

The 'nature' of ἀρχαί is discussed in

> *CP* VI.6.10 ἐπεὶ κἀκεῖνο ἄτοπον, εἰ οἱ χυλοὶ πάντες ἐκ τοῦ πικροῦ καὶ γλυκέος μιγνυμένων, ὥσπερ ἐκ τῶν στοιχείων τὰ σώματα· πάλιν δ' αὖ θάτερον, εἰ ἐκ μὲν τούτων μηδέν, ταῦτα δ' ἐκ τῶν ἄλλων· *οὐ γὰρ ἀρχῶν ἡ τοιαύτη φύσις*. εἰ μὴ ἄρα πλεοναχῶς αἱ ἀρχαὶ καὶ κατὰ πλείους τρόπους, ὅπερ ἔοικεν, ὥσπερ κατὰ συστοιχίαν ἐνίων λεγομένων. ἀλλ' οὖν δὴ τούτων μὲν πέρι λόγος ἕτερος.

The use of the plural **ἐχούσας** (*v.l.* ἔχουσαν), although somewhat *ad sensum*, is in accordance with the fact that nothing as yet has been decided as to the manner in which the object of our inquiry is likely to be one.

> I agree with INDEMANS (1953) 98 n.14 that the use of the plural is not a feature of "careless style", as R-F have it; on the other hand neither do I see that it has anything to do with recitation (*ibid.*). It might rather be ascribed to scrupulousness on the part of the author; compare καὶ τίνες, εἰ πλείους 4 b 11.

Of course, the assumption that the objects of thought we are looking for have the nature of an ἀρχή does not come as a surprise to us, because the νοητά we are looking for were τὰ πρῶτα τῆς φύσεως all the time—as we are going to establish for ourselves presently.[1] This does not, however, seriously detract from the persuasive force of the argument, since the power to operate as an ἀρχή is the very point in which the mathematicals (even according to the most favourable conception of these entities) failed; see (οὐχ ὥστε συνάπτειν τοῖς τῆς φύσεως) ὥστ' ἐμποιῆσαι καθάπερ ζωὴν καὶ κίνησιν αὐτοῖς, 4 b 2-4, and *ad* πρώτοις below.

The first step, therefore, towards identification of the more powerful νοητά we are looking for, is that they are likely to be found in few things and in things out of the ordinary (**ἐν ὀλίγοις ... καὶ περιττοῖς**; for the use of ἐν cp. ἐν τοῖς μαθηματικοῖς, 4 a 18). If they are not one ἀριθμῷ, they are not likely to be many either; περιττοῖς appears to be a first attempt to determine the εἶδος involved: they are likely to be found in the class of 'extraordinary things'.

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[1] See below; also note *ad* τοῖς ... νοητοῖς, 4 a 10-1.

The plausibility of their being limited in number is based upon a principle of economy involving the nature of an ἀρχή (see *ad* εὐλογώτερον above): the fewer principles there are to account for the plurality of natural phenomena the better. Compare

> Arist. *PA* 665 b 14-5 ἀρχὴν δὲ τούτων (i.e. of blood-vessels) ἀναγκαῖον εἶναι μίαν· ὅπου γὰρ ἐνδέχεται, μίαν βελτίον ἢ πολλάς.
>
> *Phys.* 259 a 8-10 ἕν δὲ μᾶλλον ἢ πολλά, καὶ πεπερασμένα ἢ ἄπειρα, δεῖ νομίζειν (sc. the prime mover(s)). τῶν αὐτῶν γὰρ συμβαινόντων, αἰεὶ τὰ πεπερασμένα μᾶλλον ληπτέον· ἐν γὰρ τοῖς φύσει δεῖ τὸ πεπερασμένον καὶ τὸ βέλτιον, ἂν ἐνδέχηται, ὑπάρχειν μᾶλλον.[1]

It is to be noted that the plausibility involved in ἀρχῆς φύσιν ἐχούσας obtains particularly in the case of the 'ultimate', unmoved principle(s) —and that is, of course, what we are dealing with; see also ἡ πάντων ἀρχή, 4 b 15.

> Arist. Fr. 17 Rose ἡ ἀρχὴ ἢ μία ἢ πολλαί. καὶ εἰ μὲν μία, ἔχομεν τὸ ζητούμενον· εἰ δὲ πολλαί, ἢ τεταγμέναι ἢ ἄτακτοι. ἀλλ' εἰ μὲν ἄτακτοι, ἀτακτότερα τὰ ἐξ αὐτῶν, καὶ οὐκ ἐστὶ κόσμος ὁ κόσμος ἀλλ' ἀκοσμία, καὶ ἔστι τὸ παρὰ φύσιν τοῦ κατὰ φύσιν μὴ ὄντος. εἰ δὲ τεταγμέναι, ἢ ἐξ ἑαυτῶν ἐτάχθησαν ἢ ὑπὸ ἔξωθεν τινὸς αἰτίας. ἀλλ' εἰ μὲν ὑφ' ἑαυτῶν ἐτάχθησαν, ἔχουσί τι κοινὸν τὸ συνάπτον αὐτὰς κἀκεῖνο ἡ ἀρχή.

Being an ἀρχή does not in itself imply a limited number.[2] This is illustrated by the fact that at a lower level of nature a plurality of (generative/moving) causes may be operative. In plants and certain insects, for instance, a plurality of ἀρχαί is operative, these entities having the special characteristic that parts of them, when separated, actually have the capacity to live:

> *CP* I.11.4 (ληπτέον,) ὅτι πᾶν δένδρον ἀρχὰς πολλὰς ἔχει πρὸς τὴν βλάστησιν καὶ τὴν καρποτοκίαν· τοῦτο δ', ὥσπερ ἐλέχθη, τῆς οὐσίας, ὅτι καὶ πολλαχόθεν ζῇ·...
>
> Arist. *PA* 682 b 27-32 ἀναγκαῖον δ' ἐντόμοις αὐτοῖς (sc. insects) εἶναι· τοῦτο γὰρ ἐν τῇ οὐσίᾳ αὐτῶν ὑπάρχει τὸ πολλὰς ἔχειν ἀρχάς, καὶ ταύτῃ προσέοικε τοῖς φυτοῖς. ὥσπερ γὰρ τὰ φυτά, καὶ ταῦτα διαιρούμενα δύναται ζῆν, πλὴν ταῦτα μὲν μέχρι τινός, ἐκεῖνα δὲ καὶ τέλεια γίνεται τὴν φύσιν καὶ δύο ἐξ ἑνὸς καὶ πλείω τὸν ἀριθμόν.

In the present context **περιττός** is obviously not used in a numerical sense, and it is used *in bonam partem*. The entities we are looking for are likely to be distinguished by exceptional qualities or powers; compare

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[1] "That the limited is (objectively) *better* than the unlimited was a Pythagorean doctrine, and indeed a characteristically Greek conviction" CORNFORD *ad loc.*

[2] For ἀρχαί referring to the elementary principles see Ch. IV, 6 b 23 ff.

Lap. 34 τὸ δ' ὅλον πολλοὶ τυγχάνουσιν οἱ τοιοῦτοι (sc. particular kinds of stones) ἀλλ' οἱ περιττοὶ σπάνιοι καὶ ἐξ ὀλίγων τόπων
1 (...) ὅσα λίθων εἴδη περιττότερα, καὶ εἴ τινες δὴ τῆς γῆς αὐτῆς ἰδιώτεραι φύσεις εἰσὶν ἢ χρώμασιν ἢ λειότησιν ἢ πυκνότησιν ἢ καὶ ἄλλῃ τινὶ δυνάμει.
28 αὕτη τε δὴ περιττὴ τῇ δυνάμει καὶ τὸ λυγγούριον· καὶ γὰρ ἐκ τούτου γλύφεται τὰ σφραγίδια καὶ ἔστι στερεωτάτη καθάπερ λίθος· ἕλκει γὰρ ὥσπερ τὸ ἤλεκτρον, οἱ δέ φασιν οὐ μόνον κάρφη καὶ φύλλα ἀλλὰ καὶ χαλκὸν καὶ σίδηρον ἐὰν ᾖ λεπτός, ὥσπερ καὶ Διοκλῆς ἔλεγεν.

εἰ μὴ ἄρα introduces an alternative possibility, expressed as an important afterthought. Th. appears to favour this manner of expressing himself;[1] see also 5 b 28, 6 a 10, 8 a 21-2, 11 b 19; compare

Ign. 51 τάχα δὲ κἀκεῖνο οὐ κακῶς, εἰ μὴ ἄρα καὶ ἀληθέστερον, ὡς οὔτε, ᾗ γίνεται, οὔπω ἔστιν, οὔτε, ᾗ φθείρεται, ὅμοιον ἔτι.
Lap. 25 στήλη γάρ ἐστιν εὐμεγέθης ἐν τῷ τοῦ Ἡρακλέους ἱερῷ· εἰ μὴ ἄρα ψευδὴς σμάραγδος, καὶ γὰρ τοιαύτη γίνεταί τις φύσις.
CP II.9.12-3 ἔτι δ' ἐχρῆν τοῖς βορείοις ἧττον ἀποπίπτειν, συμμύει γὰρ μᾶλλον, εἰ μὴ ἄρα τῷ ξηραίνεσθαι διαχάσκει. (13) φαίνεται δ' οὖν πλείους ἀντιλογίας ἔχειν τῶν πρότερον (εἰ μὴ ἄρα ἀμφοτέρως συμβαίνει καὶ ἐνδέχεται).
II.9.14 μόνον γὰρ δὴ τοῦτο τῶν ἀγρίων (sc. trees), ἢ μετ' ὀλίγων, ἀτελῆ φέρει τὸν καρπόν (εἰ μὴ ἄρα ἐνταῦθα αὐτῶν ἦν τὸ τέλος· ...)

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[1] Cp. EUCKEN (1866) 51, referred to *ad* 8 b 16, p. 405 n. 5 below. Ps.-Arist. *Spir.* 482 a 11 εἰ δ' ἀπὸ τῶν ἐντὸς καὶ τῆς κοινῆς τροφῆς, εὔλογον κἀκείνοις· ... εἰ μὴ ἄρα καὶ τούτοις ἀπὸ τοῦ ἐκτός, ὥσπερ καὶ τῶν ὀσμῶν αἰσθάνονται.; also 482 a 20 εἰ μὴ ἄρα αὐτομάτως; 483 a 18 εἰ μὴ ἄρα τοῦτο πρὸς τὴν ἐνέργειαν; 483 b 11 εἰ μὴ ἄρα καὶ ἡ ψυχὴ τοιοῦτον. For other idiomatic characteristics which the Pseudo-Aristotelian *De spiritu* shares with Th.' treatises, see REGENBOGEN 1546.10 ff.

See also Ps.-Arist. *Color.* 791 b 11 ἐπισκεπτέον δὲ τοῦτο. ἔνια γὰρ οὐκ ὄντα πῦρ οὐδὲ πυρὸς εἴδη τὴν φύσιν φῶς ποιεῖν φαίνεται. εἰ μὴ ἄρα τὸ μὲν τοῦ πυρὸς χρῶμα φῶς ἐστιν, οὐ μέντοι καὶ τὸ φῶς πυρός ἐστι χρῶμα μόνου, ἀλλ' ἐνδέχεται μὴ μόνῳ μὲν ὑπαρχειν τῷ πυρὶ τὴν χρόαν ταύτην, εἶναι μέντοι χρῶμα τὸ φῶς αὐτοῦ. About the authorship of *De coloribus*, see REGENBOGEN 1543.26 ff., esp. 1544.10 ff.

The only instance I found in Aristotle is *Met.* 1056 b 12 ἔτι εἰ ὡς ἐν μήκει τὸ μακρὸν καὶ βραχύ, οὕτως ἐν πλήθει τὸ πολὺ καὶ ὀλίγον, καὶ ὃ ἂν ᾖ πολὺ καὶ πολλά, καὶ τὰ πολλὰ πολύ (εἰ μή τι ἄρα διαφέρει ἐν συνεχεῖ εὐορίστῳ), τὸ ὀλίγον πλῆθός τι ἔσται.—unless one counts the fragments, in which, noticeably, three instances occur: Fr. 145, 122.7 Rose: περὶ δὲ τοῦ λίθου γενέσθαι οὐδὲν λέγει, ὃ ἦν μέγα. εἰ μὴ ἄρα εἰς τὸν ἀπόπλουν ἐσήμαινεν, ὥς τινές φασιν, οὐκ ἔδει δὲ ἀναμνῆσαι· εἰκὸς γὰρ ἦν ὑπολαβεῖν καὶ εἰ μή τις ἔλεγε; Fr. 208, 165.21 Rose: ὡς δὲ ἐπὶ τῶν ἄλλων τὸ γινόμενον οὐ ταὐτὸν τῷ φθαρέντι εἰ μὴ ἄρα κατ' εἶδος, οὕτω καὶ ἐπὶ τῶν κόσμων λέγουσιν.; also *ibid.* 167.7.

Cp. *ad* καὶ εἰ ἄρα 9 a 6, p. 423-4 below.

καὶ (πρώτοις) indicates that the present effort towards identification surpasses the previous one[1]—presumably not so much because the entities looked for are likely to be not merely *limited* in number but actually one,[2] but rather because their having the nature of an ἀρχή brings out their being actually *first* things (see I.1, 4 a 2-3)—and, for that matter, the first of all.[3] It is all but a platitude to say that an entity with the nature of an ἀρχή is likely to be "first":

> Arist. *Met.* 1013 a 18 πασῶν μὲν οὖν κοινὸν τῶν ἀρχῶν τὸ πρῶτον εἶναι ὅθεν ἢ ἔστιν ἢ γίγνεται ἢ γιγνώσκεται· ...

—and in the present context this outcome might be felt to be an anticlimax as well, in so far as we were looking for the νοητά constituting τὰ πρῶτα τῆς φύσεως all the time. Still, what we have gained is that τὰ πρῶτα (or, as the case may be, τὸ πρῶτον) now emerges as a characterization of a class (or, a single οὐσία); they are distinguished by a connectedness with the physical world and owing to that they have the power to operate as a moving cause. In short, in the course of the argument their being 'first' has been specified in relative and functional terms;[4] it is along these lines that we will presently be brought just a bit further towards their identification.[5]

The absence of ἐν suggests that **πρώτοις** is a specification of the less specific περιττοῖς in particular; if this is the case, **καὶ ἐν τῷ πρώτῳ** would, chiastically, be a correction of ἐν ὀλίγοις. However, πρώτοις and πρώτῳ belonging to one and the same lexeme, the effect is primarily one of climax.

4 b 11-3 τίς δ' οὖν ... ὁμοίωσιν.

At this point Th., with **δ' οὖν** again, is coming to the question which all this leads up to (see 4 a 17): the entities we are looking for are likely to be out of the ordinary, or even primary, and *the* first thing; but what is its identity (**τίς ... αὕτη**)—or *their* identity, as the case may be (**καὶ τίνες, εἰ πλείους**)?

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[1] Cp. *Ign.* 51 above, and εἰ μὴ ἄρα καὶ πρότερα, 11 b 19.

[2] Cp. ZELLER's suggestion to read ἐν ὀλίγοις εἶναι καὶ πρώτοις, εἰ μὴ ἄρα καὶ ἐν τῷ πρώτῳ, II.2 822 n. 3.

[3] In view of ἐν τοῖς πρώτοις in 11 b 13, which presumably refers to the elementary principles (see commentary *ad loc.*), h.l. πρώτοις καὶ ἐν τῷ πρώτῳ just might refer to the elementary principles and the first, unmoved principle looked for respectively. On the other hand this seems to be not very likely, in sofar as in the present context the search is obviously for the latter.

[4] See also *ad* συνεχής, 5 a 3.

[5] In 5 b 14 and 5 b 27 below τὸ πρῶτον will be used with reference to the Aristotelian principle of τὸ ὀρεκτόν.

For the use of καί to indicate an—in principle equivalent—alternative, cp. Thuc. I.82.2 διελθόντων ἐτῶν δύο καὶ τριῶν; contrast

> Arist. *Somn.* 455 a 4 διὰ τί δὲ καθεύδει καὶ ἐγρήγορε, καὶ διὰ ποίαν τιν' αἴσθησιν ἢ ποίας, εἰ διὰ πλείους, σκεπτέον.

One may compare Aristotle's tendency to reckon with the possibility that the ultimate good consists of a plurality of ἀγαθά/ἀρεταί where the precedence of a single one has been argued to be more likely: e.g. *EN* 1097 a 22-5, 1098 a 16-8. See also ἀπὸ ... ταύτης ἢ τούτων τῶν ἀρχῶν 6 a 15-6.

The use of **ἐμφαίνειν** to indicate the human activity of "making clear" something is not very common; more frequently the verb has a non-human subject (a thing, a situation, "shows that ..."; see 11 a 14). But compare

> Ps.-Plato *Demod.* 383 D 2-5 καὶ εἰ ὁ μὲν εἷς ὀρθῶς καὶ ἀληθῆ λέγων ἐμφανίσαι ἃ λέγει οὐ δυνήσεται, δύο δέ, ὧν ὁ ἕτερος ψεύσεται καὶ οὐκ ὀρθῶς ἐρεῖ, δυνήσονται ἐμφανίσαι τοῦτο ὃ ὁ λέγων ὀρθῶς ἐμφανίσαι οὐχ οἷός τ' ἦν.[1]

ἀμῶς γέ πως ("in some way or other") expresses that the *manner in which* this is made clear is not important as long as it *is* made clear, and thus has the effect of stressing the obligation expressed by the verbal adjective. Compare

> Arist. *Phys.* 196 a 16 διὸ καὶ ἀμῶς γέ πως ἦν ποιητέον αὐτοῖς μνείαν.

εἴτε ... εἴτε ... enumerates the possible ways of doing this; compare

> Aristoph. *Thesm.* 429 νῦν οὖν ἐμοὶ τούτῳ δοκεῖ / ὄλεθρόν τιν' ἡμᾶς κυρκανᾶν ἀμωσγέπως, / ἢ φαρμάκοισιν ἢ μιᾷ γέ τῳ τέχνῃ, / ὅπως ἀπολεῖται.

The manner in which the identity of the first thing(s) may be made clear is through comparison: either through analogy or otherwise. As Th. points out in 9 a 4 ff., analogy is the method through which knowledge can be acquired if no other similarity is applicable: the object in question is assumed to be like some other object which, ontologically speaking, is comparatively far removed. Accordingly, it may be successful as a heuristic method in those cases where other methods fail.

Knowledge through analogy is based on a similarity, most often (or in any case most characteristically: see *ad* 9 a 7) with something that belongs to another γένος. Its most characteristic form is proportion.[2] This method is pro-

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[1] Also Emp. B 131.3-4 DK εὐχομένῳ νῦν αὖτε παρίστασο, Καλλιόπεια, / ἀμφὶ θεῶν μακάρων ἀγαθὸν λόγον ἐμφαίνοντι.

[2] See e.g. Arist. *Poet.* 1457 b 16-9 (about μεταφορά): τὸ δὲ ἀνάλογον λέγω, ὅταν ὁμοίως ἔχῃ τὸ δεύτερον πρὸς τὸ πρῶτον καὶ τὸ τέταρτον πρὸς τὸ τρίτον· ἐρεῖ γὰρ ἀντὶ τοῦ δευτέρου τὸ τέταρτον ἢ ἀντὶ τοῦ τετάρτου τὸ δεύτερον.

Cp. also the 'hypothetical' syllogism κατὰ ἀναλογίαν, ascribed to Th. by Alex. Aphr. *In An. Pr.* 326.8-27, 113A & B FHS&G.

ductive especially in biology; knowledge of plants, for instance, may be acquired by applying an analogy with animals: see

> *HP* I.1.5 οὐ δεῖ δὲ οὐδὲ τοῦτο λανθάνειν εἴ τι κατ' ἀναλογίαν θεωρητέον, ὥσπερ ἐπὶ τῶν ζῴων, τὴν ἀναφορὰν ποιουμένους δῆλον ὅτι πρὸς τὰ ἐμφερέστατα καὶ τελειότατα. (also *CP* IV.4.9);

or the other way around:

> Arist. *GA* 715 b 16-21 ὅσα δὲ μὴ πορευτικὰ καθάπερ τὰ ὀστρακόδερμα τῶν ζῴων καὶ τὰ ζῶντα τῷ προσπεφυκέναι, διὰ τὸ παραπλησίαν αὐτῶν εἶναι τὴν οὐσίαν τοῖς φυτοῖς, ὥσπερ οὐδ' ἐν ἐκείνοις οὐδ' ἐν τούτοις ἐστὶ τὸ θῆλυ καὶ τὸ ἄρρεν ἀλλ' ἤδη καθ' ὁμοιότητα καὶ κατ' ἀναλογίαν λέγεται· μικρὰν γάρ τινα τοιαύτην ἔχει διαφοράν.

Usually a *functional* similarity is involved.[1]

ὁμοίωσις obviously is used here as the more comprehensive term (ὁμοιότης being used more commonly in this way, as in *GA* 715 b 17 quoted above; see also 8 a 20):

> Arist. *PA* 644 b 11-5 τὰ γὰρ μόρια διαφέρουσι τούτων οὐ τῇ ἀνάλογον ὁμοιότητι, οἷον ἐν ἀνθρώπῳ καὶ ἰχθύϊ πέπονθεν ὀστοῦν πρὸς ἄκανθαν, ἀλλὰ μᾶλλον τοῖς σωματικοῖς πάθεσιν, οἷον μεγέθει μικρότητι, μαλακότητι σκληρότητι, λειότητι τραχύτητι καὶ τοῖς τοιούτοις, ὅλως δὲ τῷ μᾶλλον καὶ ἧττον.
>
> *CP* I.16.4 οὐ μὴν γε οὐδὲ τὰ ἰσχυρότατα σπερματικώτατα, ἀλλὰ σχεδὸν ἐναντίως, ἑκατέρωθεν μεριζομένης τῆς τροφῆς καὶ δυνάμεως, ὃ δὴ καὶ ἐπὶ τῶν φυτῶν συμβαίνει, κατὰ λόγον συμβαῖνον· οὕτω δὲ καὶ τὴν ἀναλογίαν λαμβάνειν ὡς εἰς ὁπότερον ἂν τούτων ὁρμήσῃ, θάτερον ἐλλιπέστερον ἔσται, διαρκεῖν γὰρ οὐ δύναται πρὸς ἄμφω· τοῦτο γὰρ σχεδὸν ἐν ἅπασιν ὁμολογούμενον.
>
> I.16.6 τάχα δ' οὐδ' ἂν τῳ δόξειεν ὅλως ἄτοπον εἶναι τὸ μᾶλλον ἐφικνεῖσθαι τὰ ἄγρια τῶν σπερμάτων, ὥσπερ ἄρρενα ὄντα, πυκνότερά τε καὶ ξηρότερα τὴν φύσιν· διαθηλύνουσι γὰρ αἱ κατεργασίαι καὶ αἱ τροφαί. τοῦτο μὲν οὖν ὡς καθ' ὁμοιότητά τινα λεγέσθω, πορρωτέρω κείμενον.

Elsewhere ὁμοιότης is, in a more restricted sense, "(die) über die blosse Funktionsgleichheit hinausgehende Ähnlichkeit" FIEDLER (1978) 26, who refers to

> Arist. *HA* 497 b 32-4 τῷ δὲ στήθει τῷ τοῦ ἀνθρώπου πάντα τὰ ζῷα ἀνάλογον ἔχει τοῦτο τὸ μόριον, ἀλλ' οὐχ ὅμοιον· ὁ μὲν γὰρ πλατὺ τὸ στῆθος, τὰ δ' ἄλλα στενόν.[2]

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[1] See e.g. FIEDLER (1978) 22 ff.; WOEHRLE (1985) 133 ff.

[2] "ὅμοιον meint ... vor allem die Gleichheit der äusseren Form von Organen oder Teile sowie ihrer Struktur im engeren Sinne, was nur innerhalb der Gattungen gegeben ist.", *ibid.*

See also

> Ps.-Arist. *Physiogn.* 805 b 10-5 οἱ δ' ἐκ τῶν θηρίων φυσιογνωμονοῦντες οὐκ ὀρθῶς τὴν ἐκλογὴν τῶν σημείων ποιοῦνται. οὐ γὰρ δὴ ἑκάστου τῶν ζῴων τὴν ἰδέαν διεξελθόντα ἔστιν εἰπεῖν ὅτι, ὃς ἂν ὅμοιος τούτῳ τὸ σῶμα ᾖ, καὶ τὴν ψυχὴν ὅμοιος ἔσται. πρῶτον μὲν γὰρ ὡς ἁπλῶς εἰπεῖν οὕτως ὅμοιον θηρίῳ ἄνθρωπον οὐδεὶς ἂν εὕροι, ἀλλὰ προσεοικότα μέν τι.

As Kraemer (1971) 177 (also (1968) 301) has pointed out, there appears to be a connection between the concept of ἀναλογία and the 'mathematizing' tendencies in the early Academy.[1] The characteristic feature of the Academic use of analogy is that it is assumed to mirror the order existent in being itself. In Aristotle analogy appears as a heuristic method,[2] as is the case here.

4 b 13-6 ἀνάγκη δ' ἴσως ... διαμένει.

Slightly in contrast to the suggestion of *the manner in which* the identity of the primary entity is to be determined being irrelevant (see ἀμῶς γέ πως, 4 b 12), it is now added (**δ(έ)**) that its identity probably must be grasped through a unique manner of comparison, i.e. that of pointing out its superiority over everything else.

For the use of **λαμβάνειν**[3] cp. 8 a 19-20 κατ' ἀναλογίαν ληπτέον, 9 a 27 καθόλου καὶ κοινόν τι λαβεῖν; 11 b 25 πειρατέον τινὰ λαμβάνειν ὅρον. For the 'intensional' use of the dative, *vid. ad* ποίοις 4 a 2 above and *CP* I.10.7 τοῖς ποίοις ληπτέον quoted *ad loc.* Contrast the ('instrumental') use of the dative in expressions like ὡς τύπῳ λαβεῖν e.g. *CP* I.20.3 (see also *HP* I.1.6, below), ὡς (τῷ) γένει λαβεῖν *Od.* 7, *Sud.* 5.

Generally speaking, the use of **ἀνάγκη** suggests that reality itself[4] indicates the method suggested as the proper one in this particular case—apparently in contradistinction to εὐλογία, which, as we have seen, does not

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[1] Cp., e.g., the Platonic division of the line as an illustration of the analogy between forms of knowledge and the different types of objects involved, as expounded in *Resp.* VI-VII, 509 D 1 ff.; the term ἀναλογία appears in 534 A 6.

[2] See e.g. *Phys.* 191 a 8 ἡ δὲ ὑποκειμένη φύσις ἐπιστητὴ κατ' ἀναλογίαν.

[3] See Bonitz s.v. 4, 422 b 33-41: "usus v λαμβάνειν non ad ea solum refertur, quae ἄμεσα, ἀναπόδεικτα ponuntur ac sumuntur (cf. λαμβάνεται κατ' ἀναλογίαν (...)) sed omnino λαμβάνειν est animo concipere, ita quidem ut modo investigandi ..., modo inveniendi cognoscendi definiendi intelligendi vim habeat."

[4] For ἀνάγκη indicating the necessity of nature cp. *CP* I.8.1. τῶν δ' ἐκ τῶν σπερμάτων ἅπαντα ταῦτα ἀνάγκη γεννᾶσθαι πρῶτον, ἔπειθ' οὕτως αὐξηθῆναι. Cp. I.12.1 ἐν ἐκείνῃ γὰρ τὴν ῥίζαν πρότερον ἢ τὸν βλαστὸν ἀφιέναι πάντα, προϋπάρχειν γὰρ ἀναγκαῖον ᾧ τὴν τροφὴν ἐπάξεται.

in itself presuppose a foundation in reality: see note *ad* εὐλογώτερον 4 a 13 above; compare

HP I.4.3 ἀλλὰ τὰ τοιαῦτα καὶ ὅλως τὸ οὕτω σκοπεῖν (i.e. aspiring to ἀκριβολογία) οὐκ οἰκείως ἐστὶ σκοπεῖν· οὐδὲ γὰρ οὐδ' ἡ φύσις οὕτως οὐδ' ἐν τοῖς τοιούτοις ἔχει τὸ ἀναγκαῖον.
CP I.1.1 τοῦτο δὲ καὶ τῇ αἰσθήσει φανερὸν ὅτι συμβαίνει, κατὰ δὲ λόγον ἴσως ἀναγκαῖον·...
I.6.3 εὔλογοι δὲ καὶ αἱ ὧραι, μᾶλλον δὲ ἴσως ἀναγκαῖαι, καθ' ἃς καὶ ὅλως ἐπιβλαστήσεις γίνονται· μετόπωρόν τε καὶ ἔαρ καὶ Κυνὸς ἐπιτολή· δεῖ γὰρ ὀργῶν[1] φέρειν. ("for we must take a graft that feels the urge to sprout", tr. EINARSON/LINK).
Arist. *Phys.* 256 b 23 εὔλογον, ἵνα μὴ ἀναγκαῖον εἴπωμεν, ...

The addition of **ἴσως** in itself does not necessarily weaken the force of the ἀνάγκη involved: "saepe ἴσως non dubitantis est, sed cum modestia quadam asseverantis" BONITZ 347 b 32-4 s.v.; compare

Sens. 69 ὅλως δὲ μέγιστον ἐναντίωμα καὶ κοινὸν ἐπὶ πάντων, ἅμα μὲν πάθη ποιεῖν (sc. Democritus) τῆς αἰσθήσεως, ἅμα δὲ τοῖς σχήμασι διορίζειν· καὶ τὸ αὐτὸ φαίνεσθαι τοῖς μὲν πικρὸν τοῖς δὲ γλυκὺ τοῖς δ' ἄλλως· οὔτε γὰρ οἷόν τε τὸ σχῆμα πάθος εἶναι οὔτε ταὐτὸν τοῖς μὲν σφαιροειδὲς τοῖς δ' ἄλλως (*ἀνάγκη δ' ἴσως*, εἴπερ τοῖς μὲν γλυκὺ τοῖς δὲ πικρόν) οὐδὲ κατὰ τὰς ἡμετέρας ἕξεις μεταβάλλειν τὰς μορφάς.

In 'programmatic' contexts too ἀνάγκη/ἀναγκαῖον ἴσως introduces what is considered to be the appropriate way of proceeding, with respect to the subject-matter involved; e.g.

Arist. *Juv.* 467 b 11 περὶ δὲ νεότητος καὶ γήρως καὶ περὶ ζωῆς καὶ θανάτου λεκτέον νῦν· ἅμα δὲ καὶ περὶ ἀναπνοῆς ἀναγκαῖον ἴσως τὰς αἰτίας εἰπεῖν· ἐνίοις γὰρ τῶν ζῴων διὰ τοῦτο συμβαίνει τὸ ζῆν καὶ τὸ μὴ ζῆν.
DA 402 a 23 πρῶτον δ' ἴσως ἀναγκαῖον διελεῖν ἐν τίνι τῶν γενῶν καὶ τί ἐστι, λέγω δὲ πότερον τόδε τι καὶ οὐσία ἢ ποιὸν ἢ ποσὸν ἢ καί τις ἄλλη τῶν διαιρεθεισῶν κατηγοριῶν, ἔτι δὲ πότερον τῶν ἐν δυνάμει ὄντων ἢ μᾶλλον ἐντελέχειά τις· διαφέρει γὰρ οὔ τι μικρόν.

As appears from θεία γὰρ κ.τ.λ. 4 b 15, the necessity of applying this particular method is here based upon the sublimity of the subject-matter involved: apparently the divinity of the primary entity does not allow its identity to be grasped by any common method; and at first sight there certainly is a case to be made for KRAEMER's interpretation, who assumes the method described here to be distinct *both* from the method proceeding by means of analogy *and* from that proceeding by means of another similarity:

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[1] ὀργῶντα Gaza (*turgida* [sc. *germina*]), Scaliger (EINARSON/LINK *app. crit.*).

"die bei Theophrast als dritte hinzutretende Methode καθ' ὑπεροχήν" ((1971) 177). Kraemer (1964) 105 f. in this connection refers to

'Albinus' = Alcinous p. 165, 24-30 H. τρίτη δὲ νόησις (sc. τοῦ πρώτου θεοῦ) τοιαύτη τις ἂν εἴη· θεωρῶν γάρ τις τὸ ἐπὶ τοῖς σώμασι καλὸν μετὰ τοῦτο μέτεισιν ἐπὶ τὸ τῆς ψυχῆς κάλλος, εἶτα τὸ ἐν ἐπιτηδεύμασι καὶ νόμοις, εἶτα ἐπὶ τὸ πολὺ πέλαγος τοῦ καλοῦ, μεθ' ὃ αὐτὸ τὸ ἀγαθὸν νοεῖ καὶ τὸ ἐραστὸν καὶ ἐφετὸν ὥσπερ φῶς φανὲν καὶ οἷον ἐκλάμψαν τῇ οὕτως ἀνιούσῃ ψυχῇ· τούτῳ δὲ καὶ θεὸν συνεπινοεῖ *διὰ τὴν ἐν τῷ τιμίῳ ὑπεροχήν*.

Seneca *Ep.* 58.17 secundum ex his, quae sunt, ponit Plato quod eminet et exsuperat omnia. hoc ait per excellentiam esse. poeta communiter dicitur, omnibus enim versus facientibus hoc nomen est, sed iam apud Graecos in unius notam cessit: Homerum intellegas, cum audieris poetam. quid ergo hoc est? deus scilicet, maior ac potentior cunctis.

Furthermore, **δυνάμει τινί** in itself does not necessarily involve a new criterion by which the primary entity is to be recognized: the use of the term in itself is clearly anchored in the supremacy of power ascribed to this entity earlier in the argument. The use of the indefinite pronoun with its non-specific reference is probably meant to indicate that this is as far as we can get in pursuing the present train of thought: presumably the primary entity is to be identified through its power—whatever the way in which we are to conceive of it.[1]

ὑπεροχῇ appears to have affiliations in the technical sphere, denoting as it does a ὁμοίωσις in terms of "excess and defect" (ὑπεροχὴ καὶ ἔλλειψις), i.e. in terms of "the more and the less";[2] see Arist. *PA* 644 b 11 ὅλως δὲ τῷ μᾶλλον καὶ ἧττον in the preceding note (p. 125).

See also

HP I.1.6 αἱ δὲ τῶν μερῶν διαφοραὶ σχεδὸν ὡς τύπῳ λαβεῖν ἐν τρισίν, ἢ τῷ τὰ μὲν ἔχειν τὰ δὲ μή, καθάπερ φύλλα καὶ καρπόν, ἢ τῷ μὴ ὅμοια μηδὲ ἴσα, ἢ τρίτον τῷ μὴ ὁμοίως. τούτων δὲ ἡ μὲν ἀνομοιότης ὁρίζεται σχήματι χρώματι πυκνότητι μανότητι τραχύτητι λειότητι καὶ τοῖς ἄλλοις πάθεσιν, ἔτι δὲ ὅσαι διαφοραὶ τῶν χυλῶν. ἡ δὲ ἀνισότης ὑπεροχῇ καὶ ἐλλείψει κατὰ πλῆθος ἢ μέγεθος. ὡς δ' εἰπεῖν τύπῳ κἀκεῖνα πάντα καθ' ὑπεροχὴν καὶ ἔλλειψιν· τὸ γὰρ μᾶλλον καὶ ἧττον ὑπεροχὴ καὶ ἔλλειψις· ...

One may note that in this context **καί** allows of an explicative interpretation, that is to say that in the case of this particular entity a particular kind of

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[1] In the next paragraph (4 b 18 ff.) a first attempt is made: οὐκ ἂν εἴη τῷ κινεῖσθαι ..., ἄλλῃ τινὶ δυνάμει κρείττονι καὶ προτέρᾳ, so that ἡ τοῦ ὀρεκτοῦ φύσις would qualify.

[2] For the interchangeability of 'the more and the less' and 'excess and defect', see e.g. Stroemberg (1937) 32, Kullmann (1974) 257 n.2; Lennox (1980) 323 n. 8; for the use of these διαφοραί in Th.' botanical treatises see also Kraemer (1968) 308 ff.; Woehrle (1985) 117 ff.

ὁμοίωσις should be used, involving comparison, not with another entity or class of entities, but with the other entities collectively (**τῶν ἄλλων**). Such an interpretation would agree with the comparatively weak particle used at the beginning of the clause (see *ad* δέ above).

The manner in which the comparison is to be made is in its turn explained by means of an analogy: the superiority of the principle over everything else is to be grasped "as if we were dealing with god", "as if we were trying to comprehend god" (**ὥσπερ ἂν εἰ τὸν θεόν**). It is unnecessary to supply a specific verb with which the accusative is to be construed.[1]

In the case of the divinity the usual procedure is to comprehend its nature through its superiority; because we are now discussing the primary entity from a metaphysical point of view (i.e. in its quality of principle), we must presumably, in an analogical manner, grasp its nature through its superiority over everything else. Cp., in a more strictly cosmological context,

> Arist. *Cael.* 279 a 25-35 κατὰ τὸν αὐτὸν δὲ λόγον καὶ τὸ τοῦ παντὸς οὐρανοῦ τέλος καὶ τὸ τὸν πάντα χρόνον καὶ τὴν ἀπειρίαν περιέχον τέλος αἰών ἐστιν, ἀπὸ τοῦ αἰεὶ εἶναι εἰληφὼς τὴν ἐπωνυμίαν, ἀθάνατος καὶ θεῖος. ὅθεν καὶ τοῖς ἄλλοις ἐξήρτηται, τοῖς μὲν ἀκριβέστερον τοῖς δ' ἀμαυρῶς, τὸ εἶναί τε καὶ ζῆν. *καὶ γάρ, καθάπερ ἐν τοῖς ἐγκυκλίοις φιλοσοφήμασι περὶ τὰ θεῖα, πολλάκις προφαίνεται τοῖς λόγοις* ὅτι τὸ θεῖον ἀμετάβλητον ἀναγκαῖον εἶναι πᾶν τὸ πρῶτον καὶ ἀκρότατον· *ὃ οὕτως ἔχον μαρτυρεῖ τοῖς εἰρημένοις.* οὔτε γὰρ ἄλλο κρεῖττόν ἐστιν ὅ τι κινήσει (ἐκεῖνο γὰρ ἂν εἴη θειότερον) οὔτ' ἔχει φαῦλον οὐδέν, οὔτ' ἐνδεὲς τῶν αὑτοῦ καλῶν οὐδενός ἐστιν.

τὸν θεόν, then, refers to the object of theological investigation—if not of religious practice. Our assumptions concerning the omnipotence of the divinity (i.e. the divine power which we ascribe our good or bad fortune to, and which we try to influence by means of sacrifices, for instance) may show us the way in the more technical and metaphysical investigations concerning the nature of the primary entity.

The use of the article does not in itself indicate that a personal god is being referred to.[2] On the other hand, it is likely that the notion of a personal god was not foreign to Th.; cp., insofar as this may be inferred from the testi-

[1] "Dass die Griechen sich in allen Fällen der zur grammatischen Erklärung der Partikel ἄν notwendigen Ergänzung bewusst gewesen wären, is nicht anzunehmen. Vielmehr war es sicherlich das dem Redenden vorschwebende allgemeine Gedankenverhältnis, das die Zufügung der Partikel veranlasste, wie ja auch das Deutsche z. B. in den Sätzen: "er wird nicht gleich zornig, wie *unter Umständen* mancher andere" (ὡς ἂν ἄλλος τις Dem. 49, 27) ... keineswegs ein bestimmtes Verb ergänzt, woran sich die [adverbiale Bestimmung] 'unter Umstanden' ... anschliessen [könnte]." K-G II.1.244.

[2] Cp. François (1957) 305 n. 2: "L'emploi de l'article devant [θεός et δαίμων] est géné-

mony for Th.' περὶ εὐσεβείας—where Th. advances religious traditions and ways of worship to support his thesis—ὅτι δὲ οὐ εὐόγκῳ χαίρει ὁ θεὸς τῶν θυσιῶν, ἀλλὰ τῷ τυχόντι, δῆλον ἐκ τοῦ τῆς καθ' ἡμέραν τροφῆς, κ.τ.λ. (584A.165 f. FHS&G).

The use of the singular, of course, fits in well with the concept of the one power presiding over all other entities, and this enhances the plausibility of the assumption that the principle we are looking for is numerically one, as expressed in 4 b 10-11 above; cp. ἡ πάντων ἀρχή, 4 b 15. With the proviso made above, one may note that in περὶ εὐσεβείας Th. often also refers to a plurality of gods, without there being any apparent distinction from the singular:[1]

> 584A.103-4 FHS&G κάλλιστα δὲ καὶ τιμιώτατα ὧν ἡμᾶς οἱ θεοὶ εὖ ποιοῦσιν, οἱ καρποί· ...
> *ibid.* 106-8 εἰ δὲ λέγοι τις ὅτι οὐχ ἧττον τῶν καρπῶν καὶ τὰ ζῷα ἡμῖν ὁ θεὸς εἰς χρῆσιν δέδωκεν, ...

Although the divinity may appear to be nothing but a different aspect of the ultimate principle which we are trying to identify, it is introduced here as being a more familiar notion than the principle we are looking for; cp. *ad* 7 b 22-3, τὸν νοῦν καὶ τὸν θεόν.

This manner of grasping the first principle δυνάμει καὶ ὑπεροχῇ, analogical to that of grasping the divinity, apparently must be seen against the background of the comparison with a monarch; see

> Ps.-Arist. *De Mundo* 6, 397 b 9 ff., esp. 398 b 1-10: νομιστέον δὴ *τὴν τοῦ μεγάλου βασιλέως ὑπεροχὴν* πρὸς τὴν τοῦ τὸν κόσμον ἐπέχοντος θεοῦ τοσοῦτον καταδεεστέραν ὅσον τῆς ἐκείνου τὴν τοῦ φαυλοτάτου τε καὶ ἀσθενεστάτου ζῴου, ὥστε, εἴπερ ἄσμενον ἦν αὐτὸν αὐτῷ δοκεῖν Ξέρξην αὐτουργεῖν ἅπαντα καὶ ἐπιτελεῖν ἃ βούλοιτο καὶ ἐφιστάμενον διοικεῖν, *πολὺ μᾶλλον*

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ralement dépourvu de valeur sémantique. Même l'opinion ... qu'il est omis lorsqu'on exprime une pensée générale, s'est rélevée inexacte: ... Devant θεός, l'article n'apparaît qu'à partir du Ve siècle; Eschyle et Héraclite sont les premiers à en faire usage. Quand il s'agit de désigner la Puissance divine, ὁ θεός reste exceptionnel chez la plupart des poètes ..., tandis que, chez les prosateurs, Platon excepté, il devient plus fréquent que θεός seul ... Quand il signifie un dieu particulier, θεός est employé plus souvent sans article chez les poètes, exception faite toutefois de Sophocle; mais chez les prosateurs, à part quatre passages d' Hérodote, l'article ne fait jamais défaut." FRANÇOIS' study takes into account Greek literature from Homer to Plato; cp. also JONES (1913).

[1] For an attempt to clarify Th.' conception of the divine see POETSCHER (1970) 81-112, who ascribes to him "ein dreischichtiger Gottesbegriff", "dessen erste Schicht der reinste göttliche νοῦς (als κρεῖττόν τι καὶ θειότερον), dessen zweite τὸ σύμπαν γένος τῶν ἐν οὐρανῷ θεῶν (als οὐρανός oder als φαινόμενοι οὐράνιοι θεοὶ) und dessen dritte die traditionellen anthropomorphen Götter der Griechen sind." (95).

ἀπρεπὲς ἂν εἴη θεῷ. σεμνότερον δὲ καὶ πρεπωδέστερον αὐτὸν μὲν ἐπὶ τῆς ἀνωτάτω χώρας ἱδρῦσθαι, *τὴν δὲ δύναμιν διὰ τοῦ σύμπαντος κόσμου διήκουσαν* ἥλιόν τε κινεῖν καὶ σελήνην, καὶ τὸν πάντα οὐρανὸν περιάγειν, αἴτιόν τε γίνεσθαι τοῖς ἐπὶ τῆς γῆς σωτηρίας.[1]

Cp. the political analysis in e.g.

Arist. *Pol.* 1288 a 15-29 ὅταν οὖν ἢ γένος ὅλον ἢ καὶ τῶν ἄλλων ἕνα τινὰ συμβῇ διαφέροντα γενέσθαι κατ' ἀρετὴν τοσοῦτον *ὥσθ' ὑπερέχειν τὴν ἐκείνου τῆς τῶν ἄλλων πάντων*, τότε δίκαιον τὸ γένος εἶναι τοῦτο βασιλικὸν καὶ κύριον πάντων, καὶ βασιλέα τὸν ἕνα τοῦτον. καθάπερ γὰρ εἴρηται πρότερον, οὐ μόνον οὕτως ἔχει κατὰ τὸ δίκαιον ὃ προσφέρειν εἰώθασιν οἱ τὰς πολιτείας καθιστάντες, οἵ τε τὰς ἀριστοκρατικὰς καὶ οἱ τὰς ὀλιγαρχικὰς καὶ πάλιν οἱ τὰς δημοκρατικάς (*πάντες γὰρ καθ' ὑπεροχὴν ἀξιοῦσιν, ἀλλὰ ὑπεροχὴν οὐ τὴν αὐτήν*), ἀλλὰ καὶ κατὰ τὸ πρότερον λεχθέν. οὔτε γὰρ κτείνειν ἢ φυγαδεύειν οὐδ' ὀστρακίζειν δή που τὸν τοιοῦτον πρέπον ἐστίν, οὔτ' ἀξιοῦν ἄρχεσθαι κατὰ μέρος· *οὐ γὰρ πέφυκε τὸ μέρος ὑπερέχειν τοῦ παντός, τῷ δὲ τὴν τηλικαύτην ὑπερβολὴν ἔχοντι τοῦτο συμβέβηκεν.*[2] ὥστε λείπεται μόνον τὸ πείθεσθαι τῷ τοιούτῳ καὶ κύριον εἶναι μὴ κατὰ μέρος τοῦτον ἀλλ' ἁπλῶς. Cp. also

1284 a 3-11 εἰ δέ τις ἔστιν εἷς τοσοῦτον διαφέρων *κατ' ἀρετῆς ὑπερβολήν*, ἢ πλείους μὲν ἑνὸς μὴ μέντοι δυνατοὶ πλήρωμα παρασχέσθαι πόλεως, *ὥστε μὴ συμβλητὴν εἶναι* τὴν τῶν ἄλλων ἀρετὴν πάντων μηδὲ τὴν δύναμιν αὐτῶν τὴν πολιτικὴν πρὸς τὴν ἐκείνων, εἰ πλείους, εἰ δ' εἷς, τὴν ἐκείνου μόνον, *οὐκέτι θετέον τούτους μέρος πόλεως*· ἀδικήσονται γὰρ ἀξιούμενοι τῶν ἴσων, ἄνισοι τοσοῦτον κατ' ἀρετὴν ὄντες καὶ τὴν πολιτικὴν δύναμιν· *ὥσπερ γὰρ θεὸν ἐν ἀνθρώποις* εἰκὸς εἶναι τὸν τοιοῦτον.

For the interpretation of the passage in Th. it appears to be relevant that, as MULGAN (1974) has pointed out, Aristotle's description of the superiority of the monarch contains an ambiguity (if not an inconsistency): in the passage quoted above the superiority of a monarch appears to be based upon the 'summation principle',[3] that is to say, the sum-total of virtue found in his subjects as a whole is still not equal to that of the king—such in contrast to the conception according to which his superiority is founded upon actual incomparability, the quality of the monarch being beyond comparison.

Superiority of the first entity according to the summation principle—in which case it is noticeably implied that the first principle is part of the cosmic whole—would be consistent with the technical use of ὑπεροχή indicated

[1] Cp. also 397 b 20, quoted *ad* διικνουμένου 5 b 13, p. 225 below. For the reverse see Arist. *Pol.* 1284 a 3 ff., below.

[2] "for it is not in the order of nature for the part to overtop the whole, but the man that is so exceptionally outstanding has come to overtop the whole community." tr. RACKHAM.

[3] The term after BRAUN (1959).

above. In this case we should presumably grasp this entity through its superiority by applying some sort of similarity; this would not, however, be a similarity to another entity, or a class of entities, but the primary entity would be grasped through its superiority over *everything else*.

If, on the other hand, the first entity would be superior in the sense that its power is beyond comparison—in which case the entity would not be a part of the cosmic whole—its superiority could be grasped along the "via eminentiae",[1] but, with something of a paradox, also by means of an analogy, i.e. the analogy of a monarch who is incomparable to all constituents of his empire taken together in exactly the same way as the principle is incomparable to the ingredients of the cosmos.

In view of the prior-posterior relationship between the first entity and the things of nature, which has been established in the argument up till now, the most plausible procedure in this case would be to apply the special type of 'the more and the less' comparison which is unique in that it involves a surpassing of the other entities *collectively* —a situation that could be illustrated by means of the analogy of a monarch presiding over his realm according to the summation principle. Noticeably, the Aristotelian solution which will be presented in the next two paragraphs involves an analogy to a monarch whose power is incomparable: see

> Arist. *MA* 699 a 37 – b 1 καὶ αἱ μὲν ἴσαι (sc. δυνάμεις) ἀπαθεῖς ὑπ' ἀλλήλων, κρατοῦνται δὲ *κατὰ τὴν ὑπεροχήν*.—an observation which, among others, causes Aristotle to reject the idea of a prime mover *within* the cosmos: τοσαύτην οὖν δεήσει τὴν δύναμιν εἶναι τῆς γῆς ἐν τῷ ἠρεμεῖν ὅσην ὅ τε πᾶς οὐρανὸς ἔχει καὶ τὸ κινοῦν αὐτόν. εἰ δὲ τοῦτο ἀδύνατον, ἀδύνατον καὶ τὸ κινεῖσθαι τὸν οὐρανὸν *ὑπό τινος τοιούτου τῶν ἐντός*. (699 b 8-11).
>
> 700 b 32-5 τὸ δὲ ἀΐδιον καλόν, καὶ τὸ ἀληθῶς καὶ πρώτως ἀγαθὸν καὶ μὴ ποτὲ μὲν ποτὲ δὲ μή, *θειότερον καὶ τιμιώτερον ἢ ὥστ' εἶναι πρὸς ἕτερον*.[2] "But the eternally noble and that which is truly and primarily good, and not good at one time but not at another, is too divine and too honorable to be relative to anything else.", tr. NUSSBAUM.

In this introductory chapter (or, lecture?) Th., therefore, appears to be steering his own argument towards the point where it is confronted with the Aristotelian solution of an unmoved mover outside the cosmos, which is presented in the two subsequent paragraphs—and criticized soon after. Cp. Th.' presentation of the Aristotelian solution ἁπλῶς ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν in 5 a 9-10, and his own suggestion πλὴν ἴσως

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[1] KRAEMER (1964) 105-6. Cp. Plato *Resp*. 509 B 8-10.

[2] πρὸς ἕτερον PΓ; thus Nussbaum; πρότερον cet.; πρότερόν τι Jaeger. The disagreement on the part of Th. remains with both readings: cp. τὰ μὲν πρότερα 4 a 15 above.

οὐχ ὁμοίως ληπτέον ὡς εἰς τὸ ἀμερὲς ἄγοντας, κ.τ.λ. in 8 a 3-4. That there is a difference in this respect between Aristotle and Th. is also suggested by

254 A FHS&G (= Schol. in Basil. *Homil. in Hexaem.* 1.3) "οἱ μὲν *συνυπάρχειν* ἐξ ἀιδίου *τῷ θεῷ τὸν οὐρανὸν* ἀπεφήναντο". Ἀριστοτέλους ἡ δόξα. "οἱ δὲ αὐτὸν εἶναι θεὸν ἄναρχόν τε καὶ ἀτελεύτητον καὶ *τῆς τῶν κατὰ μέρος οἰκονομίας αἴτιον*"·[1] λέγουσι τὸν Θεόφραστον ἐπὶ ταύτης γενέσθαι τῆς γνώμης.

The phrase introduced by **γάρ** adds the justification of our proceeding in the same manner as in the case of our trying to comprehend god: the principle of all things *is* divine (**θεία ... ἡ πάντων ἀρχή**), and thus we are, in fact, tackling the same problem under a different aspect.
The divinity of the ἀρχή presiding over all things is of course a commonplace; see

Arist. *Philos.* Fr. 11, p. 29 Rose οὐκ ἐκ ταὐτομάτου στοχαζόμενοι (sc. οἱ πρῶτον εἰς οὐρανὸν ἀναβλέψαντες καὶ θεασάμενοι ἥλιον ... σταδιεύοντα) συμβαίνειν αὐτὴν ἀλλ' ὑπό τινος κρείττονος καὶ ἀφθάρτου φύσεως, ἥτις ἦν θεός.

Cael. 270 b 4-11 ἔοικε δ' ὅ τε λόγος τοῖς φαινομένοις μαρτυρεῖν καὶ τὰ φαινόμενα τῷ λόγῳ· πάντες γὰρ ἄνθρωποι περὶ θεῶν ἔχουσιν ὑπόληψιν, καὶ πάντες τὸν ἀνωτάτω τῷ θείῳ τόπον ἀποδιδόασι, ... εἴπερ οὖν ἔστι τι θεῖον, ὥσπερ ἔστι, καὶ τὰ νῦν εἰρημένα περὶ τῆς πρώτης οὐσίας τῶν σωμάτων εἴρηται καλῶς.

Ps.-Arist. *De Mundo* 397 b 13-6 ἀρχαῖος μὲν οὖν τις λόγος καὶ πάτριός ἐστι πᾶσιν ἀνθρώποις ὡς ἐκ θεοῦ πάντα καὶ διὰ θεοῦ ἡμῖν συνέστηκεν, οὐδεμία δὲ φύσις αὐτὴ καθ' ἑαυτὴν ἐστιν αὐτάρκης ἐρημωθεῖσα τῆς ἐκ τούτου σωτηρίας.

Cp. also

Arist. *Met.* 1064 a 36 – b 1 καὶ εἴπερ ἔστι τις τοιαύτη φύσις (sc. χωριστὴ καὶ ἀκίνητος) ἐν τοῖς οὖσιν, ἐνταῦθ' ἂν εἴη που καὶ τὸ θεῖον, καὶ αὕτη ἂν εἴη ⟨ἡ⟩ πρώτη καὶ κυριωτάτη ἀρχή.

The relative clause **δι' ἧς** κ.τ.λ. makes explicit the attribute by virtue of which the principle *is* divine: it has control of the being and not-being of everything else. Like **πάντων** in 4 b 15, **ἅπαντα** emphasizes that the principle stands in a relationship of prior and posterior to *all the rest* of being—and that is the reason why a special kind of ὁμοίωσις was required in the first place: see esp. τῶν ἄλλων above. One might compare

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[1] "cause of the organization of its parts", tr. FHS&G.

Arist. *EE* 1248 a 24-9 τὸ δὲ ζητούμενον τοῦτ' ἐστί, τίς ἡ τῆς κινήσεως ἀρχὴ ἐν τῇ ψυχῇ. δῆλον δή· *ὥσπερ ἐν τῷ ὅλῳ, θεὸς καὶ πᾶν ἐκεῖ κινεῖ*·[1] κινεῖ γάρ πως πάντα τὸ ἐν ἡμῖν θεῖον. λόγου δ' ἀρχὴ οὐ λόγος ἀλλά τι κρεῖττον. τί οὖν ἂν κρεῖττον καὶ ἐπιστήμης εἴη καὶ νοῦ πλὴν θεός;

ἔστιν and **διαμένει** explicitly state the primary importance, this time in ontological terms, of the first principle, in addition to its role as a cause of movement, which results from the requirement of a συναφή with the things of nature: see esp. 4 b 2-4. The correlation of the two καί's emphasizes the fact that the fundamental role played by the primary entity is not limited to the generation of entities: the ἀρχή is not only the beginning and cause of their existence, but at the same time all things depend on this principle for their preservation.[2]

The verb διαμένειν denotes persistence through time:

Ign. 4 τοῦτο γὰρ ἦν καὶ τὸ παρὰ τῶν παλαιῶν λεγόμενον, ὅτι τροφὴν ἀεὶ ζητεῖ τὸ πῦρ ὡς οὐκ ἐνδεχόμενον αὐτὸ διαμένειν ἄνευ τῆς ὕλης.

Lap. 12 ἔνιοι δὲ τῶν θραυστῶν ἀνθρακοῦνται (glow like charcoal) τῇ καύσει καὶ διαμένουσι πλείω χρόνον ὥσπερ οἱ περὶ Βίνας ἐν τῷ μετάλλῳ οὓς ὁ ποταμὸς καταφέρει· καίονται γὰρ ὅταν ἄνθρακες ἐπιτεθῶσι καὶ μέχρι τούτου ἄχρις ἂν φυσᾷ τις, εἶτ' ἀπομαραίνονται καὶ πάλιν καίονται, διὸ καὶ πολὺν χρόνον ἡ χρῆσις· ...

Od. 34 οἷον ἡ ἶρις εἰς μὲν τὴν ἐργασίαν ἀκμάζει μετὰ τὴν συλλογὴν τρία ἔτη, καὶ διαμένει δὲ πλεῖστον χρόνον ἓξ ἔτη. τὸ δὲ μάρον ἔτη δύο.

Accordingly it is commonly used to denote the survival of an organism, i.e. its persistence through the natural term of its life: see e.g.

HP I.1.2 τὸ μὲν οὖν μέρος ἅτε ἐκ τῆς ἰδίας φύσεως ὂν ἀεὶ δοκεῖ διαμένειν ἢ ἁπλῶς ἢ ὅταν γένηται, καθάπερ ἐν τοῖς ζῴοις τὰ ὕστερον γενησόμενα, πλὴν εἴ τι διὰ νόσον ἢ γῆρας ἢ πήρωσιν ἀποβάλλεται.

CP I.16.1 ἡ δὲ (πέψις αὐτῶν τῶν καρπῶν) πρὸς γέννησιν καὶ διαμονὴν τῶν δένδρων, οἱ γὰρ καρποὶ καὶ τὰ σπέρματα τούτων χάριν.

I.10.4 ἀλλ' ὅμως οὐ δύναται (sc. purslane, cucumber and the like) πρὸ τῶν θερμημεριῶν βλαστάνειν εἴς γε διαμονὴν καὶ τελέωσιν.

As a result, the term does not by itself denote eternal existence—this must be explicitly added in some way: see e.g. Arist. *Met.* 984 a 16 διαμένειν ἀΐδια;[3] and, as we have seen above (*HP* I.1.2), even the addition of ἀεί may denote nothing more than persistence through the term of life; see also *HP* IV.13.6 οὕτως αἰεὶ διαμένειν, which is said of a tree, if treated properly.

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[1] ἐκεῖ κινεῖ Jackson; ἐκείνῳ MSS.

[2] Cp. Arist. *Cael.* 279 a 28-30 ὅθεν καὶ τοῖς ἄλλοις ἐξήρτηται ... τὸ εἶναί τε καὶ ζῆν, p. 129 above.

[3] Referring to Anaxagoras' ὁμοιομερῆ.

If **ἅπαντα** is interpreted as denoting all things individually, the primary entity is merely said to be responsible for the existence of each and all of them, as long as they actually last;[1] if, on the other hand, it is interpreted as denoting all things collectively, this would mean that the cosmos lasts by virtue of this primary entity.[2]

As will be seen later on, as far as Th. is concerned, this lasting of all things (the span of life of which may vary from eternity to a single day) collectively might actually be conceived of as some sort of life of the universe: see 8 a 5-6 ὡς ἂν πόλις ἢ ζῷον ... ἢ καὶ ὁ ὅλος οὐρανός; 10 a 15-6 οἷον ... ζωή τις ἡ περιφορὰ τοῦ παντός.

4 b 16-8 τάχα μὲν ... πειστικωτέρως.

Th. concludes this part of his investigation (**μὲν οὖν**: cp. 6 b 11) by expressing some reservations as to its being sufficiently clear and convincing—noticeably not as to its being correct.

In this treatise **τάχα** occurs remarkably often (13 times, five of which are followed by ἄν). In most instances, it introduces a conceivable reaction to the preceding statement (either in the manner of a 'dialogue intérieur', as here, or with the introduction of a hypothetical interlocutor: e.g. τάχα δὲ καὶ τοῦτ' ἄν τις ἐπιζητήσειεν, διὰ τί ..., 5 b 10-1). This reaction sometimes involves a conceivable correction: see *ad* 8 b 12.

τὸ οὕτως ἀποδοῦναι refers to the explanation of the primary entity as being responsible for the existence of everything else; in view of what follows οὕτως implies "vaguely", "broadly": see below. For the use of ἀποδιδόναι ("assign a reason", "give an account of"; "account for", "explain"),[3] cp. 5 a 10-1; also

> *Sens.* 57 καὶ περὶ μὲν ὄψεως καὶ ἀκοῆς οὕτως ἀποδίδωσι (sc. Democritus), τὰς δὲ ἄλλας αἰσθήσεις σχεδὸν ὁμοίως ποεῖ τοῖς πλείστοις.

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[1] But compare the Aristotelian conception of the persistence through time of individual entities in a teleological perspective: *DA* 415 a 26 – b 7 φυσικώτατον γὰρ τῶν ἔργων τοῖς ζῶσιν, ..., τὸ ποιῆσαι ἕτερον οἷον αὐτό, ζῷον μὲν ζῷον, φυτὸν δὲ φυτόν, ἵνα τοῦ ἀεὶ καὶ τοῦ θείου μετέχωσιν ᾗ δύνανται· πάντα γὰρ ἐκείνου ὀρέγεται, καὶ ἐκείνου ἕνεκα πράττει ὅσα πράττει κατὰ φύσιν. τὸ δ' οὗ ἕνεκα διττόν, τὸ μὲν οὗ, τὸ δὲ ᾧ. ἐπεὶ οὖν κοινωνεῖν ἀδυνατεῖ τοῦ ἀεὶ καὶ τοῦ θείου τῇ συνεχείᾳ, διὰ τὸ μηδὲν ἐνδέχεσθαι τῶν φθαρτῶν ταὐτὸ καὶ ἓν ἀριθμῷ *διαμένειν*, ᾗ δύναται μετέχειν ἕκαστον, κοινωνεῖ ταύτῃ, τὸ μὲν μᾶλλον τὸ δὲ ἧττον, καὶ *διαμένει* οὐκ αὐτὸ ἀλλ' οἷον αὐτό, ἀριθμῷ μὲν οὐχ ἕν, εἴδει δ' ἕν.

[2] One might compare, from a physical point of view, ἴσως δ' ἂν εἴη ... ὑπὲρ αὐτῆς τῆς κινήσεως ἀπορεῖν, εἰ ἀφαιρεθεῖσα *φθείροι ἂν τὸν οὐρανόν*, 6 a 12 ff.

[3] Contrast the use of this verb without involving an explanation ("assign"): ἀποδιδόναι τὰς αἰτίας, τὰς διαφοράς, *CP* I.10.7, *HP* I.2.7; also τὴν ἐνέργειαν καὶ τὴν οὐσίαν ἀποδιδούς, 5 a 7-8.

ibid. 87 ὁρίσας γὰρ τὸ θερμὸν σχήματι τὸ ψυχρὸν οὐχ ὡσαύτως ἀπέδωκεν.
Vent. 8 ἐπεὶ τό γε σύνεγγυς (proximity to the source) ἀπαιτεῖ τὸ μέγεθος. τὰ γὰρ τοιαῦτα μάλιστα ἐκ τῶν τόπων ἀποδοτέον, ἅπερ κατὰ φύσιν ἔχει.

Although it may be easy to give an account of the primary entity in these *functional* terms—as a matter of fact we did to a certain extent achieve what we set out to do and we did throw some light upon its identity (4 b 11 ff.)—, it remains difficult to determine it more clearly or more convincingly (**σαφεστέρως ἢ πειστικωτέρως**). One might think of Aristotle's statement that every τέχνη, rhetoric excepted, περὶ τὸ αὑτῇ ὑποκείμενόν ἐστιν διδασκαλικὴ καὶ πειστική (*Rhet.* 1355 b 27-8); seen in that light, Th.' use of ἤ rather than καί evinces a realistic (or, at least, practical) attitude. Compare

Arist. *Top.* 105 a 16-9 ἔστι δ' ἡ μὲν ἐπαγωγὴ πιθανώτερον καὶ σαφέστερον καὶ κατὰ τὴν αἴσθησιν γνωριμώτερον καὶ τοῖς πολλοῖς κοινόν, ὁ δὲ συλλογισμὸς βιαστικώτερον καὶ πρὸς τοὺς ἀντιλογικοὺς ἐνεργέστερον.
301B FHS&G (= Clem. Alex. *Strom.* 2.2, 9.5) Θεόφραστος δὲ τὴν αἴσθησιν ἀρχὴν εἶναι πίστεώς φησιν· ἀπὸ γὰρ ταύτης αἱ ἀρχαὶ πρὸς τὸν λόγον τὸν ἐν ἡμῖν καὶ τὴν διάνοιαν ἐκτείνονται.
CP I.22.6 οὐ γὰρ ἔτι ταῦτα (effects of heat in plants) λόγου δεῖται πρὸς τὴν πίστιν, ἀλλὰ καὶ ἡ τῶν ἰατρῶν χρεία μαρτυρεῖ καὶ ἡ αἴσθησις.

It may be relevant that in the present passage, too, the difficulties arise from the entity's not being accessible to the senses (see 4 a 6-7); in 9 b 8-16 Th. speaks with more confidence about the possiblity of having knowledge of the primary entities by means of some kind of intuition on the part of νοῦς. Nevertheless, even with an infallible intuition it might well still be difficult to give a clear or, for that matter, convincing account.

This conclusion, and particularly the distinction made in (...) **μὲν ... ῥᾴδιον, χαλεπὸν δέ** is reminiscent of the (rather obscure) opening of book *alpha elatton* in Aristotle's *Metaphysics*, 993 a 30 – b 11:

(ὅτι) ἡ περὶ τῆς ἀληθείας θεωρία *τῇ μὲν χαλεπὴ τῇ δὲ ῥᾳδία*. σημεῖον δὲ τὸ μήτ' ἀξίως μηδένα δύνασθαι θιγεῖν[1] αὐτῆς μήτε πάντας ἀποτυγχάνειν, ἀλλ' ἕκαστον λέγειν τι περὶ φύσεως, καὶ καθ' ἕνα μὲν μηθὲν ἢ μικρὸν ἐπιβάλλειν αὐτῇ, ἐκ πάντων δὲ συναθροιζομένων γίγνεσθαί τι μέγεθος· ὥστ' εἴπερ ἔοικεν ἔχειν καθάπερ τυγχάνομεν παροιμιαζόμενοι, τίς ἂν θύρας ἁμάρτοι; *ταύτῃ μὲν ἂν εἴη ῥᾳδία*, τὸ δ' ὅλον τι ἔχειν καὶ μέρος μὴ δύνασθαι[2] δηλοῖ τὸ *χαλεπὸν αὐτῆς*.

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[1] θιγεῖν A^b (cp. *Met.* A, 988 b 18); τυχεῖν E. Cp. 9 b 15 below.
[2] "the fact that we can have a whole truth and not the particular part we aim at" *RevOT*; "the fact that we cannot, although having some grasp of the whole, grasp a particular part" tr. TREDENNICK.

ἴσως δὲ καὶ τῆς χαλεπότητος οὔσης κατὰ δύο τρόπους, οὐκ ἐν τοῖς πράγμασιν ἀλλ' ἐν ἡμῖν τὸ αἴτιον αὐτῆς· ὥσπερ γὰρ τὰ τῶν νυκτερίδων ὄμματα πρὸς τὸ φέγγος ἔχει τὸ μεθ' ἡμέραν, οὕτω καὶ τῆς ἡμετέρας ψυχῆς ὁ νοῦς πρὸς τὰ τῇ φύσει φανερώτατα πάντων. (Cp. 9 b 10-3.)

I.5 (4 b 18 – 5 a 5): *The principle, showing a connection with nature, which is characteristically in movement, should obviously be conceived as its moving cause. Taking into account that a moving cause is itself without movement, it should impart movement on the strength of some capacity more powerful than this. The object of desire meets this requirement, and has the advantage of solving the problem of an infinite regress of causes imparting movement.*

4 b 18-22 τοιαύτης ... τῆς κινήσεως·

For the use of the singular (**τῆς ἀρχῆς**, but cp. 4 b 8-11 above) see *ad* πάντων and ἅπαντα 4 b 15 and 16 above. The phrase in effect summarizes the outcome—vague (**τοιαύτης**; see *ad* οὕτως 4 b 17) though it may be—of the discussion in the preceding paragraph, to the effect that the primary entity controls the existence of everything else (or, as the case may be, of all things collectively).

We now return to the criterion of its connection with the sensible objects (see 4 a 13-4), the very criterion by which the mathematical objects failed to qualify (4 a 19-20, 4 b 2-4).

ἐπείπερ introduces the consideration from which a particular inference is drawn; cp.

Plato *Soph.* 236 B 7 ἆρ' οὐκ, ἐπείπερ φαίνεται μέν, ἔοικε δὲ οὔ, φάντασμα (sc. καλοῦμεν);

256 D 9 οὐκοῦν δὴ σαφῶς ἡ κίνησις ὄντως οὐκ ὄν ἐστι καὶ ὄν, ἐπείπερ τοῦ ὄντος μετέχει;

Arist. *Cael.* 301 b 10 διαιρεθέντος δὴ τοῦ βάρος ἔχοντος σώματος ὡς ἡ ΓΕ πρὸς τὴν ΓΔ, συμβήσεται τὸ ἀφαιρούμενον ἀπὸ τοῦ βάρος ἔχοντος σώματος τὴν ΓΕ φέρεσθαι ἐν ἴσῳ χρόνῳ, ἐπείπερ τὸ ὅλον ἐφέρετο τὴν ΓΔ.

Ps.-Arist. *Plant.* 815 a 34 τινὲς δὲ ἔχειν ψυχὰς τὰ φυτὰ εἶπον, ὅτι γεννᾶσθαι τρέφεσθαι καὶ αὐξάνεσθαι, νεάζειν καὶ χλοάζειν γήρᾳ τε διαλύεσθαι τεθεωρήκασιν, ἐπείπερ οὐδὲν ἄψυχον ταῦτα μετὰ τῶν φυτῶν ἔχει κοινά.

The statement **ἡ ... φύσις (...) ἐν κινήσει** sc. ἐστί is made without qualification (**ὡς ἁπλῶς εἰπεῖν**), complications being in this way left aside. Thus, for instance, the property of being ἐν κινήσει does not apply to the several

parts of nature in the same manner or to the same degree:[1] cp. 11 a 5 ff., where Th. criticizes the unqualified ascription to nature of a desire for the best; also 10 a 9-10 καίτοι τό γε κινεῖσθαι καὶ ἁπλῶς τῆς φύσεως οἰκεῖον *καὶ μάλιστα τοῦ οὐρανοῦ*.

κίνησις is the distinctive property (**τὸ ἴδιον**) of nature, i.e. it belongs to the whole of nature and to nature only; see

> Arist. *Top.* 102 a 18-22 ἴδιον δ' ἐστὶν ὃ μὴ δηλοῖ μὲν τὸ τί ἦν εἶναι, μόνῳ δ' ὑπάρχει καὶ ἀντικατηγορεῖται τοῦ πράγματος, οἷον ἴδιον ἀνθρώπου τὸ γραμματικῆς εἶναι δεκτικόν· εἰ γὰρ ἄνθρωπός ἐστι, γραμματικῆς δεκτικός ἐστι, καὶ εἰ γραμματικῆς δεκτικός ἐστιν, ἄνθρωπός ἐστιν.

The addition of this second consideration (ἡ δὲ φύσις κ.τ.λ.) gives the argument the character of a logical inference. Since (a) there is a connection between the principle and the sensible objects (i.e. the things of nature: see *ad* 4 a 20), and (b) it is a characteristic property of nature to be in movement, (a+b) it is evident that the principle should be considered as the cause of movement.

For **δῆλον ὡς** introducing the conclusion of such a quasi-syllogistic argument[2] compare

> *CP* I.20.5 f. εἰ δὲ τοῦτό ἐστιν, καὶ τὸ πρότερον εἰρημένον ἀληθές ..., γίγνεται δὲ τοῦτο μάλιστα χώρας ἀρετῇ καὶ ἰσχύϊ τῶν δένδρων ..., δῆλον ὡς ὅσα τὴν φύσιν ἀσθενῆ, ταῦθ' ἥκιστα ὑπερβλαστάνει, κ.τ.λ.[3]
>
> Arist. *GC* 328 a 7 ἐπεὶ δ' οὐκ ἔστιν εἰς τὰ ἐλάχιστα διαιρεθῆναι, οὔδε σύνθεσις ταὐτὸ καὶ μίξις ἀλλ' ἕτερον, δῆλον ὡς οὔτε κατὰ μικρὰ σωζόμενα δεῖ τὰ μιγνύμενα φάναι μεμῖχθαι ... οὔτε τῇ διαιρέσει ὥστε ὁτιοῦν παρ' ὁτιοῦν μέρος, ἀδύνατον γὰρ οὕτω διαιρεθῆναι.

For the use of **θετέον** cp.

> *HP* I.6.8 διόπερ ἀπορήσειεν ἄν τις εἰ ῥίζας τὰς τοιαύτας θετέον· ᾗ μὲν γὰρ κατὰ γῆς δόξαιεν ἄν, ᾗ δὲ ὑπεναντίως ἔχουσι ταῖς ἄλλαις οὐκ ἂν δόξαιεν.
>
> *Sens.* 71 ἔτι δὲ τὸ θερμόν τε καὶ ψυχρόν, ἅπερ ἀρχὰς τιθέασιν, εἰκὸς ἔχειν τινὰ φύσιν, εἰ δὲ ταῦτα καὶ τὰ ἄλλα.[4]

At first sight the argument seems to amount to nothing more than a rather over-scrupulous way of endowing the principle with the function of a mov-

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[1] Cp. *ad* ὡς εἰπεῖν 7 a 16, 7 a 18.

[2] Wieland (([2]1970) 59-60 n.) rightly criticizes the attempt to formalize such arguments, as ancient commentators were prone to do.

[3] But with a the second 'premiss' following, e.g. *Sens.* 70 ἔτι δὲ εἴπερ μὴ ἔστι φύσις τῶν αἰσθητῶν διὰ τὸ μὴ ταὐτὰ πᾶσι φαίνεσθαι, δῆλον ὡς οὐδὲ τῶν ζῴων οὐδὲ τῶν ἄλλων σωμάτων· οὐδὲ γὰρ περὶ τούτων ὁμοδοξοῦσι.

[4] I therefore fail to see why R-F classify αἰτίαν as an adjective (see their index s.v.).

ing cause; after all this was the outcome of the previous paragraph, in so far as this function was already implied there (see 4 b 1-3). In this connection, the emphatic position of **αἰτίαν** too might cause some surprise. All in all, one is left with the impression that somehow a new start is being made; and in fact Th. will presently go on to identify our vague conception of the principle we are looking for with one of the four Aristotelian "αἰτίαι", i.e. the unmoved cause of movement.

Thus, at this point of the argument, where the difficulty of finding a clearer conception of the principle is stressed, Th. resorts to the Aristotelian solution, a solution that in an important respect conflicts with the outcome of the argument up till now, and will be criticized elsewhere in this treatise. See following note.

4 b 22 – 5 a 1 ἐπεὶ δ' ... αἰτία.

The being without movement of the principle, a property which was part of the general conception of the 'first things' as put forward 4 a 7 above, is presented here as a solid fact. If we are supposed to have inferred this from the designation of movement as the distinctive characteristic of *nature* (see *ad* τὸ ἴδιον, preceding note), the text as it stands gives us little reason to do so. As a matter of fact, Th. will question the necessity of postulating an unmoved principle in 7 b 19 ff.: δοκεῖ δὲ καὶ ἡ αἴσθησις τρόπον τινὰ συναυδᾶν ὡς ἐνδεχόμενον μὴ ἀεὶ τὸ κινοῦν ἕτερον εἶναι καὶ ὃ κινεῖ κ.τ.λ.; see also 10 a 15 ff.

καθ' αὑτήν "by virtue of itself", i.e. 'by virtue of its definition', ἀκίνητος being the essential predicate of the principle: cp. the second use of καθ' αὑτό as distinguished by Aristotle, *Met.* 1022 a 24 ff. ὅσα ἐν τῷ τί ἐστιν ὑπάρχει, οἷον ζῷον ὁ Καλλίας καθ' αὑτόν· ἐν γὰρ τῷ λόγῳ ἐνυπάρχει τὸ ζῷον· ζῷον γάρ τι ὁ Καλλίας· (27-9).

If there is a difference between **φανερόν** and δῆλον (for instance to the effect that "φανερὸν dicitur quod oculis cernitur, δῆλον quod menti lustranti manifestum est", Waitz (1846) 327), the present passage cannot be adduced in support of it; in 5 a 21 and 8 b 10 below φανερόν also involves 'mental perceptibility'. Apparently both words can be used to refer to perceptual and to mental 'visibility', a distinction which may not have any reality at all, because the mind is often conceived of as a sort of (superior) sense-organ (cp. note *ad* θεωρίαν 4 a 3 above). See e.g.

Ps.-Arist. *Lin. insec.* 971 a 3-7 ἐπεὶ δὲ οἵ τε λόγοι, δι' ὧν ἐπιχειροῦσι πείθειν, ἀσθενεῖς εἰσι καὶ ψευδεῖς, ἐναντίαι δὲ δόξαι πᾶσι τοῖς ἰσχύουσι πρὸς πίστιν, φανερὸν ὅτι οὐκ ἂν εἴη γραμμὴ ἄτομος. δῆλον δ' ἐκ τούτων ὅτι οὐδ'

ἂν ἐκ στιγμῶν εἴη γραμμή. σχεδὸν γὰρ οἱ πλεῖστοι τῶν λόγων οἱ αὐτοὶ ἁρμόσουσιν.

It should be emphasized that there is no trace of an argument here for the unmovedness of the principle: the cause of movement cannot cause movement *by being in movement* simply because, as was assumed in the first paragraph, τὸ πρῶτον, being νοητόν as it is, is without movement. (Obviously **κινεῖσθαι** is in the middle voice, since its being in movement would imply a capacity: see the contrasting ἄλλῃ τινὶ δυνάμει 5 a 1.) No appeal, therefore, is made here to the argument of a regressus;[1] the advantage of the principle not being in movement itself—for this would ask for an explanation in its turn—will be presented as a concomitant advantage of the Aristotelian solution of τὸ ὀρεκτόν: see 5 a 4-5.

τοῖς τῆς φύσεως αἰτία—or to put it more precisely, for the movement of these entities; in the present context, however, this is easily understood without supplying τῆς κινήσεως: see preceding note.

5 a 1-2 ἀλλὰ λοιπὸν ... προτέρᾳ·

As in 5 b 18 below, **ἀλλὰ λοιπόν** introduces the possibility which remains where others fail to apply (ἀλλά summarizes the negative outcome of the preceding). Compare

> CLXXI.11 W. τὸν δὲ τόπον οὔτ' ἐπίκλυσιν ποταμοῦ λαμβάνειν οὔθ' ὕδατος σύστασιν, ἀφ' ὧν δή φαμεν ἐγκαταλείπεσθαι τὰ ᾠὰ καὶ τὰς ἀρχὰς τῆς γενέσεως. λοιπὸν γὰρ δὴ αὐτομάτους φύεσθαι, καὶ τοῦτο συνεχῶς—ἀδύνατος γὰρ ἡ πρὸς ἀλλήλους μίξις—, ...

Since the principle we are looking for is without movement, it is necessarily by virtue of a more powerful and (therefore) ontologically prior power that this principle constitutes a cause to (the movement of) nature. (ἄλλῃ τινὶ) δυνάμει **κρείττονι καὶ προτέρᾳ** mirrors (ἑτέρα τις) οὐσία προτέρα καὶ κρείττων 4 b 6 above: a power which is more powerful is also ontologically prior in the same way as an entity which is ontologically prior is also more powerful: compare

> Arist. *Met.* 1018 b 22-3 (πρότερα καὶ ὕστερα λέγεται) κατὰ δύναμιν· τὸ γὰρ ὑπερέχον τῇ δυνάμει πρότερον, καὶ τὸ δυνατώτερον· ...

At the same time the Aristotelian solution is presented as an attempt to be more specific about the δύναμις καὶ ὑπεροχή and this was the very characteristic by means of which the primary entity could be grasped (4 b 13-4

[1] For which see Arist. *Phys.* 256 a 28 ff.

above): its power and superiority over all other entities does *not* consist in movement of some kind, but in its being the object of desire.

The term δύναμις remains applicable; cp. ἡ τοῦ ἕλκειν δύναμις referring to the power to attract other objects, which is ascribed to a magnetic stone, *Lap.* 29.[1]

5 a 2-4 τοιαύτη δ' ... ἄπαυστος.

If there were any doubt that Th. is presenting the Aristotelian solution to the problem he is addressing, this doubt should be taken away by the introduction at this point, quite out of nowhere, of 'the object of desire'.

τοιαύτη—this time with a more limited reference (contrast 4 b 18), i.e. of having a power which is prior and superior to movement. **ἡ τοῦ ὀρεκτοῦ φύσις** in a way provides an answer to the question τίς ἡ φύσις αὐτῶν (sc. τῶν νοητῶν, i.e. τῶν πρώτων) in 4 a 17: see note *ad loc.*
For the function of τὸ ὀρεκτόν imparting movement by inspiring desire, see Arist. *MA* 700 b 23-4 κινεῖ πρῶτον τὸ ὀρεκτὸν καὶ διανοητόν; as the final cause of ὄρεξις it imparts movement without being in movement itself:

> Arist. *Met.* 1072 a 21-7 (...) ἔστι τι ἀεὶ κινούμενον κίνησιν ἄπαυστον, αὕτη δ' ἡ κύκλῳ (καὶ τοῦτο οὐ λόγῳ μόνον ἀλλ' ἔργῳ δῆλον), ὥστε ἀΐδιος ἂν εἴη ὁ πρῶτος οὐρανός. ἔστι τοίνυν τι καὶ ὃ κινεῖ. ἐπεὶ δὲ τὸ κινούμενον καὶ κινοῦν μέσον ... τοίνυν ἔστι τι ὃ οὐ κινούμενον κινεῖ, ἀΐδιον καὶ οὐσία καὶ ἐνέργεια οὖσα. κινεῖ δὲ ὧδε *τὸ ὀρεκτὸν καὶ τὸ νοητόν· κινεῖ οὐ κινούμενα*.
> *MA* 700 b 3 – 701 a 1 τὸ μὲν οὖν πρῶτον οὐ κινούμενον κινεῖ, ἡ δ' ὄρεξις καὶ τὸ ὀρεκτικὸν κινούμενον κινεῖ.[2]

ἀπό + genitive may express the origin of natural phenomena, apparently irrespective of the mode of causation involved; here, of course, τὸ ὀρεκτόν constitutes a final cause; cp., however, (ψυχή), ἀφ' ἧς καὶ αἱ ὀρέξεις πρὸς ἕκαστον, 5 b 4. Also

> *Ign.* 62 ἡ πλείων θερμότης κρατοῦσα τῆς ἐλάττονος καὶ ἀναξηραίνουσα τὴν γινομένην σύντηξιν, ἀφ' ἧς αἱ φλύκταιναι, ...[3]
> *Vent.* 47 (...) ὅταν ὁ ἥλιος ἕλκων μηκέτι κρατῇ, τότε ἀφιέμενος ὁ ἀὴρ ῥεῖ, καὶ δυόμενος οὖν καταλείπει νέφη, ἀφ' ὧν τὰ ζεφύρια.

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[1] Cp. Arist. *DA* 405 a 19-21 ἔοικε δὲ καὶ Θαλῆς ἐξ ὧν ἀπομνημονεύουσι κινητικόν τι τὴν ψυχὴν ὑπολαβεῖν, εἴπερ τὴν λίθον ἔφη ψυχὴν ἔχειν, ὅτι τὸν σίδηρον κινεῖ.

[2] For the coexistence of these two factors, ὀρεκτόν and ὄρεξις, as two different aspects of one and the same self-mover, see *Phys.* 258 a 2 ff.

[3] "the liquid matter that had been formed, from which blisters arise".

Cp. also

> 307A.11-4 FHS&G (= Them. *In de An.* 3.5) καὶ πότερον ἀπ' ἐκείνου ἡ ἀρχὴ ἢ ἀπ' αὐτοῦ;[1] τῷ μὲν γὰρ πάσχειν, ἀπ' ἐκείνου[2] δόξειεν ἂν (οὐδὲν γὰρ ἀφ' ἑαυτοῦ τῶν ἐν πάθει)· τῷ δὲ ἀρχὴν πάντων εἶναι καὶ ἐπ' αὐτῷ τὸ νοεῖν, καὶ μὴ ὥσπερ ταῖς αἰσθήσεσιν, ἀπ' αὐτοῦ.

ἡ κυκλική (sc. κίνησις); "In view of ᵇ 23 it seems as if ἡ κυκλική had become almost a technical term in the sense of ἡ κυκλικὴ κίνησις, so that the insertion of κίνησις is unnecessary." R-F *ad loc.*

Once again an Aristotelian tenet is put forward as a statement of fact: the contention that the object of desire inspires (sc. the heavens) with circular movement is based upon two assumptions (which in their turn are based upon the presupposition that there necessarily is *eternal* movement), (1) that locomotion is the 'best' kind of movement,

> Arist. *Phys.* 260 a 21-9 σκεπτέον γὰρ πότερον ἐνδέχεταί τινα κίνησιν εἶναι συνεχῆ ἢ οὔ, καὶ εἰ ἐνδέχεται, τίς αὕτη, καὶ τίς πρώτη τῶν κινήσεων· δῆλον γὰρ ὡς *εἴπερ ἀναγκαῖον μὲν ἀεὶ κίνησιν εἶναι*, πρώτη δὲ ἥδε καὶ συνεχής, ὅτι τὸ πρῶτον κινοῦν κινεῖ ταύτην τὴν κίνησιν, ἣν ἀναγκαῖον μίαν καὶ τὴν αὐτὴν εἶναι καὶ συνεχῆ καὶ πρώτην. τριῶν δ' οὐσῶν κινήσεων, τῆς τε κατὰ μέγεθος καὶ τῆς κατὰ πάθος καὶ τῆς κατὰ τόπον, ἣν καλοῦμεν φοράν, ταύτην ἀναγκαῖον εἶναι πρώτην.
>
> 260 b 5-7 *εἰ ἄρα ἀνάγκη ἀεὶ κίνησιν εἶναι*, ἀνάγκη καὶ φορὰν ἀεὶ εἶναι πρώτην τῶν κινήσεων, καὶ φορᾶς, εἰ ἔστιν ἡ μὲν πρώτη ἡ δ' ὑστέρα, τὴν πρώτην.

and (2) that circular movement is the 'best' kind of locomotion

> *Phys.* 264 b 18-28 ἡ μὲν γὰρ κύκλῳ κίνησίς ἐστιν ἀφ' αὐτοῦ εἰς αὐτό, ἡ δὲ κατ' εὐθεῖαν ἀφ' αὐτοῦ εἰς ἄλλο· καὶ ἡ μὲν ἐν τῷ κύκλῳ οὐδέποτε ἐν τοῖς αὐτοῖς, ἡ δὲ κατ' εὐθεῖαν πολλάκις ἐν τοῖς αὐτοῖς· *τὴν μὲν οὖν ἀεὶ ἐν ἄλλῳ καὶ ἄλλῳ γιγνομένην* ἐνδέχεται κινεῖσθαι συνεχῶς, τὴν δ' ἐν τοῖς αὐτοῖς πολλάκις οὐκ ἐνδέχεται, ἀνάγκη γὰρ ἅμα κινεῖσθαι τὰς ἀντικειμένας. ὥστ' οὐδ' ἐν τῷ ἡμικυκλίῳ οὐδ' ἐν ἄλλῃ περιφερείᾳ οὐδεμιᾷ ἐνδέχεται συνεχῶς κινεῖσθαι· πολλάκις γὰρ ἀνάγκη ταὐτὰ κινεῖσθαι καὶ τὰς ἐναντίας μεταβάλλειν μεταβολάς· οὐ γὰρ συνάπτει τῇ ἀρχῇ τὸ πέρας. ἡ δὲ τοῦ κύκλου συνάπτει, καὶ *ἔστι μόνη τέλειος*.
>
> *Met.* 1071 b 10-1 κίνησις δ' οὐκ ἔστι συνεχὴς ἀλλ' ἢ ἡ κατὰ τόπον, καὶ ταύτης ἡ κύκλῳ.
>
> 1072 b 8-9 φορὰ γὰρ ἡ πρώτη τῶν μεταβολῶν, ταύτης δὲ ἡ κύκλῳ· ...

Both assumptions will be called in question by Th. in 5 a 28 ff.; see esp. εἰ δ' οὖν τῆς κυκλικῆς αἴτιον τὸ πρῶτον, οὐ τῆς ἀρίστης ἂν εἴη· κρεῖττον γὰρ ἡ τῆς ψυχῆς κ.τ.λ., 5 b 7 ff.

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[1] "And is the starting-point from that (the object) or from (the intellect) itself?" FHS&G.

[2] Wimmer reads τὸ μὲν γὰρ πάσχειν ἀπ' ἐκείνου κ.τ.λ.

In the present context ἡ συνεχής—the primacy of locomotion being taken for granted—explicitly states the property which causes circular movement to be *the best* form of locomotion; **καὶ ἄπαυστος** adds the relevant effect in time: "and (therefore) neverending".

Arist. *Phys.* 259 b 22-8 ὥστ' εἴπερ ἀνάγκη συνεχῶς εἶναι κίνησιν, εἶναί τι δεῖ τὸ πρῶτον κινοῦν ἀκίνητον καὶ κατὰ συμβεβηκός, εἰ μέλλει, (καθάπερ εἴπομεν) ἔσεσθαι ἐν τοῖς οὖσιν ἄπαυστός τις καὶ ἀθάνατος κίνησις καὶ μενεῖν[1] τὸ ὂν αὐτὸ ἐν αὑτῷ καὶ ἐν τῷ αὐτῷ· τῆς γὰρ ἀρχῆς μενούσης ἀνάγκη καὶ τὸ πᾶν μένειν, συνεχὲς ὂν πρὸς τὴν ἀρχήν.

Cael. 279 b 1-3 καὶ ἄπαυστον δὴ κίνησιν κινεῖται (sc. τὸ θεῖον) εὐλόγως· πάντα γὰρ παύεται κινούμενα ὅταν ἔλθῃ εἰς τὸν οἰκεῖον τόπον, τοῦ δὲ κύκλῳ σώματος ὁ αὐτὸς τόπος ὅθεν ἤρξατο καὶ εἰς ὃν τελευτᾷ.

283 b 26 – 284 a 11 ὅτι μὲν οὖν οὔτε γέγονεν ὁ πᾶς οὐρανὸς οὔτ' ἐνδέχεται φθαρῆναι, καθάπερ τινές φασιν αὐτόν, ἀλλ' ἔστιν εἷς καὶ ἀΐδιος, *ἀρχὴν μὲν καὶ τελευτὴν οὐκ ἔχων τοῦ παντὸς αἰῶνος*, ἔχων δὲ καὶ περιέχων ἐν αὑτῷ τὸν ἄπειρον χρόνον, ἔκ τε τῶν εἰρημένων ἔξεστι λαμβάνειν τὴν πίστιν, καὶ διὰ τῆς δόξης τῆς παρὰ τῶν ἄλλως λεγόντων καὶ γεννώντων αὐτόν·... διόπερ καλῶς ἔχει συμπείθειν ἑαυτὸν τοὺς ἀρχαίους καὶ μάλιστα πατρίους ἡμῶν ἀληθεῖς εἶναι λόγους, ὡς ἔστιν *ἀθάνατόν τι* καὶ θεῖον τῶν ἐχόντων μὲν κίνησιν, ἐχόντων δὲ τοιαύτην ὥστε μηθὲν εἶναι πέρας αὐτῆς, ἀλλὰ μᾶλλον ταύτην τῶν ἄλλων πέρας· τό τε γὰρ πέρας τῶν περιεχόντων ἐστί, καὶ αὕτη *τέλειος οὖσα* περιέχει τὰς ἀτελεῖς καὶ τὰς ἐχούσας πέρας καὶ παῦλαν, αὐτὴ μὲν *οὐδεμίαν οὔτ' ἀρχὴν ἔχουσα οὔτε τελευτήν, ἀλλ' ἄπαυστος οὖσα τὸν ἄπειρον χρόνον*, τῶν δ' ἄλλων τῶν μὲν αἰτία τῆς ἀρχῆς, τῶν δὲ δεχομένη τὴν παῦλαν.

See also *Met.* 1072 a 21, above.

Cp. δι' ἧς ἅπαντα καὶ ἔστιν καὶ διαμένει 4 b 16, where it is argued that the persistence of all things depends on the first principle, without circular motion being invoked as a guarantee for eternity; in itself this is not inconsistent with the present picture (but see note *ad* ἅπαντα, 4 b 16 above); cp. however Aristotle's query at the beginning of *Phys.* VIII, 250 b 11-5:

πότερον δὲ γέγονέ ποτε κίνησις οὐκ οὖσα πρότερον, καὶ φθείρεται πάλιν οὕτως ὥστε κινεῖσθαι μηδέν, ἢ οὔτ' ἐγένετο οὔτε φθείρεται, ἀλλ' ἀεὶ ἦν καὶ ἀεὶ ἔσται, καὶ τοῦτ' *ἀθάνατον καὶ ἄπαυστον* ὑπάρχει τοῖς οὖσιν, *οἷον ζωή τις οὖσα* τοῖς φύσει συνεστῶσι πᾶσιν;

—which makes redundant the idea of an unmoved mover; see 10 a 15-6 below, and note *ad loc.*

The conception of the principle of movement as being the object of desire will be examined in the next chapter.

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[1] μενεῖν Themistius, Ross ("From the nature of the argument it is clear that this word depends on μέλλει b 24. It must therefore be written μενεῖν", Ross *ad loc.*); μένειν MSS.

5 a 4-5 ὥστε ... κινήσει.

κατ' ἐκεῖνο MSS.; καὶ ἐκεῖνο USENER (1861) 266; κἀκεῖνο Camotius.

κατ' ἐκεῖνο, the reading of the MSS., can be kept if it is interpreted as a more emphatic equivalent of καθ' ὅ (which is unsuitable for this function since in this collocation κατά tends to have a limitative value): "so that in this manner ...", "so that along these lines ...", referring to the notion of a δύναμις operating by means of attraction.[1] There seems, then, to be no reason to adopt Usener's conjecture καὶ ἐκεῖνο.[2]

ἐκεῖνο might well refer to τὸ ὀρεκτόν (τοῦ ὀρεκτοῦ 5 a 2),[3] as R-F (*ad loc.*) have it: "Thus in the object of desire we should find the solution ..." tr. R-F; "par suite, c'est en s'appuyant sur le Désiderable que ..." tr. TRICOT. But this interpretation seems to strain κατά to an intolerable degree, and as a matter of fact Th. probably would have used ἐν ἐκείνῳ in that case: compare

Plato *Prot.* 324 E 1 πότερον ἔστιν τι ἓν ἢ οὐκ ἔστιν οὗ ἀναγκαῖον πάντας τοὺς πολίτας μετέχειν, εἴπερ μέλλει πόλις εἶναι; ἐν τούτῳ γὰρ αὕτη λύεται ἡ ἀπορία ἣν σὺ ἀπορεῖς ἢ ἄλλοθι οὐδαμοῦ.

For the use of λύειν, λύεσθαι to denote the solution of an ἀπορία see also

CP II.17.7 ταῦτα μὲν οὖν οὐ λύει τὴν ἀπορίαν, ἀλλ' ἐπιξυνδεῖ μᾶλλον. Also *Ign.* 45, n. 2 above.

It is, of course, unnecessary to supplement *τὸ ⟨ἀπόρημα τοῦ⟩ μὴ εἶναι: for λύεσθαι without ἀπορία/ἀπόρημα being added compare

Arist. *Met.* 1072 a 19-22 ἐπεὶ δ' οὕτω τ' ἐνδέχεται (sc. the situation of cyclic change), καὶ εἰ μὴ οὕτως, ἐκ νυκτὸς ἔσται καὶ ὁμοῦ πάντων καὶ ἐκ μὴ ὄντος, λύοιτ' ἂν ταῦτα, καὶ ἔστι τι ἀεὶ κινούμενον κίνησιν ἄπαυστον, αὕτη δ' ἡ κύκλῳ· (see also preceding note).

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[1] Cp. INDEMANS (1953) 19 "op grond van laatste redenering"; L-M "par là", i.e. "l'argument qui vient d'être formulé", *ad loc.*

[2] USENER refers to Camotius: "Gegen seine Gewohnheit hat hier Camotius konjiziert und im ganzen richtig gesehen, wenn er f.18 sagt: κἀκεῖνο ἀναγνωστέον, οὐ κατ' ἐκεῖνο ὥς τινες λέγουσιν. Oder sollte er jenes in Hss. gefunden haben?" (*l.c.*).
The conjecture is plausible in itself; a close parallel is to be found in *Ign.* 45 ἐκ ταύτης δέ πως τῆς αἰτίας καὶ ἐκεῖνο λύεται τὸ ἀπόρημα διὰ τί ποτε ἡ μὲν κοιλία τήκει τὰ νομίσματα, τὸ δὲ ὕδωρ ζέον θερμότερον ὂν οὐ τήκει. ("This explanation answers after a fashion the well-known question why the belly melts coins", tr. COUTANT); cp. also *ibid.* 38 ἐν τούτῳ δ' οὖν τῷ γένει καὶ ἐκεῖνο τὸ ἀπορούμενον, διὰ τί ὁ μὲν ἥλιος μελαίνει τὴν σάρκα, τὸ δὲ πῦρ οὔ.; *Vent.* 32 ἐκεῖνο δ' ἂν δόξειεν ἄτοπον καὶ παράλογον εἶναι, διὰ τί κ.τ.λ.; *ibid.* 59 ἐκεῖνο δ' ἐν ἀπορίᾳ καὶ ζητήσει μᾶλλον γίνεται καθ' ἑκάτερον, οἷον εἰ μὴ κ.τ.λ.

[3] For the use of ἐκεῖνο referring to the more remote of two preceding objects cp. 5 a 26 below τί οὖν ἅμα τῇ μιμήσει φασὶν ἐκεῖνο, which obviously refers to τὴν ἠρεμίαν in 5 a 24-5.

ἤ is used here, following a negative, as an equivalent of πλήν to introduce the alternative, positive situation: "or it must be ..."; ἢ εἰ here is equivalent to πλὴν εἰ "unless". For this use of ἤ cp. 7 b 8 διὰ τί τὸ πλέον ἀδύνατον ἢ εἰς τὸ χεῖρον ἡ μετάβασις ("or the change would be for the worse"; also Plato *Phaedr.* 245 D 8, below), and, more transparently, 10 a 19 οὐδ' ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις τὴν φορὰν (sc. ζητητέον) ἢ τρόπον τινὰ ἀφωρισμένον (see also 10 a 17); and even more simply *Vent.* 25 ἀπὸ μόνου δὲ τοῦ Νείλου δοκοῦσιν οὐκ ἀποπνεῖν αὖραι ἢ ἐλάχισται. See also R-F *ad loc.*

The problem referred to obviously has to do with the Platonic concept of the ἀρχὴ κινήσεως which is found in τὸ αὐτὸ αὑτοῦ κινοῦν, i.e. τὸ ὑφ' ἑαυτοῦ κινούμενον (so e.g. USENER (1861) 265 n.); see

> Plato *Phaedr.* 245 C 5 – E 1 ψυχὴ πᾶσα ἀθάνατος. τὸ γὰρ ἀεικίνητον[1] ἀθάνατον· τὸ δ' ἄλλο κινοῦν καὶ ὑπ' ἄλλου κινούμενον, παῦλαν ἔχον κινήσεως, παῦλαν ἔχει ζωῆς. μόνον δὴ τὸ αὐτὸ κινοῦν, ἅτε οὐκ ἀπολεῖπον ἑαυτό, οὔποτε λήγει κινούμενον, ἀλλὰ καὶ τοῖς ἄλλοις ὅσα κινεῖται τοῦτο πηγὴ καὶ ἀρχὴ κινήσεως. ... (D 6) οὕτω δὴ κινήσεως μὲν ἀρχὴ τὸ αὐτὸ αὑτὸ κινοῦν. τοῦτο δὲ οὔτ' ἀπόλλυσθαι οὔτε γίγνεσθαι δυνατόν, ἢ πάντα τε οὐρανὸν πᾶσάν τε γῆν εἰς ἓν συμπεσοῦσαν στῆναι καὶ μήποτε αὖθις ἔχειν ὅθεν κινηθέντα γενήσεται.

The problem is, of course, that the concept of τὸ αὐτὸ αὑτοῦ κινοῦν leaves the self-movement unaccounted for. Although this is not a problem to some philosophers, and even an advantage in the eyes of others,[2] Aristotle objects: see *ad* ἐπεὶ δ' ἀκίνητος καθ' αὑτήν, 4 b 22.

> Arist. *Phys.* 257 b 12-23 τὸ μὲν ἄρα κινεῖ τὸ δὲ κινεῖται τοῦ αὐτὸ αὑτὸ κινοῦντος. ὅτι δ' οὐκ ἔστι τὸ αὐτὸ αὑτὸ κινοῦν οὕτως ὥσθ' ἑκάτερον ὑφ' ἑκατέρου κινεῖσθαι, ἐκ τῶνδε φανερόν. οὔτε γὰρ ἔσται πρῶτον κινοῦν οὐδέν, εἴ γε αὐτὸ ἑαυτὸ κινήσει ἑκάτερον (τὸ γὰρ πρότερον αἰτιώτερον τοῦ κινεῖσθαι τοῦ ἐχομένου καὶ κινήσει μᾶλλον· διχῶς γὰρ κινεῖν ἦν, τὸ μὲν τὸ ὑπ' ἄλλου κινούμενον αὐτό, τὸ δ' αὑτῷ· ἐγγύτερον δὲ τὸ πορρώτερον τοῦ κινουμένου τῆς ἀρχῆς ἢ τὸ μεταξύ)· ἔτι οὐκ ἀνάγκη τὸ κινοῦν κινεῖσθαι εἰ μὴ ὑφ' αὑτοῦ· κατὰ συμβεβηκὸς ἄρα ἀντικινεῖ θάτερον. ἔλαβον τοίνυν ἐνδέχεσθαι μὴ κινεῖν· ἔστιν[3] ἄρα τὸ μὲν κινούμενον τὸ δὲ κινοῦν ἀκίνητον.

The Aristotelian concept of an ἀκίνητος οὐσία, which moves by virtue of its being the object of desire (see preceding note), does provide a solution for this problem, since the part (or aspect) of the self-mover causing the movement is not in movement itself.

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[1] αὐτοκίνητον Pap. Oxy. 1017. See ROWE *ad loc.*

[2] See Arist. *DA.* 403 b 29 f. (about some of his predecessors): *οἰηθέντες δὲ τὸ μὴ κινούμενον αὐτὸ μὴ ἐνδέχεσθαι κινεῖν ἕτερον*, τῶν κινουμένων τι τὴν ψυχὴν ὑπέλαβον εἶναι.

[3] ἔσται *v.l.*

—It is once again to be noted that further on in this treatise Th. will speak in terms suggesting that he is one of those who do not make a problem of self-movement as the ultimate explanation of cosmic movement: see 10 a 15-9; and note the optative λύοιτο ἄν, which suggests a lack of involvement on the part of the author.

The Greek **κινούμενον**, once again, does not distinguish between the middle and the passive voice; the ἀπορία involved is evoked in both interpretations. A passive interpretation brings forth most sharply the problem of an infinite regress; a middle interpretation brings out the characteristic of the Platonic self-moving principle which Aristotle particularly objected to. The ambivalence cannot be preserved in English, and it seems best to keep in line with κινεῖσθαι 4 b 23 above (see note *ad loc.*) and render the participle in the middle voice too. The neuter is used *ad sensum*: κινήσεως ἀρχήν, i.e. τὸ κινοῦν.

The future tense of **κινήσει** lends modal force to the alternative expressed by (μὴ) εἶναι: if the principle will not impart movement by virtue of being in movement itself, there is, i.e. in that situation there *can be*, no principle of movement in the first place. To put it differently, the ἀπορία could be formulated as *οὐκ ἔσται κινήσεως ἀρχὴ ἢ εἰ κινούμενον κινεῖ.

In this paragraph an unmoved cause of movement is introduced which is (1) endowed with a "power and superiority" which does not conform to the relationship of prior and posterior made plausible in the preceding argument,[1] and which is (2) criticized later on in this treatise (7 b 19 ff., cp. 10 a 15 ff.). It should be noted that this procedure lends the argument a 'dialectical' character in the sense that the treatise reflects a 'dialogue intérieur', possibly written down for didactic purposes. As it is difficult to be more specific about the nature of the principle (4 b 16-8 above) the author presents as an at first sight feasible option the solution which is current, or at least available, in Peripatetic circles. It is this that makes it at the same time impossible to characterize the argument as 'dialectical' in the sense that the presentation of thesis and antithesis leaves us with equipollent possibilities. Cp. Introduction, p. 3.

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[1] See note *ad* δυνάμει τινι καὶ ὑπεροχῇ, 4 b 14.

I.6 (5 a 5-13): *So far the account is consistent, in assuming that there is one principle characterized by activity and being, and without ascribing divisibility or quantity to it, simply raising it to a more divine level; for we should take care to avoid the suggestion that a privation is involved, which is naturally inappropriate where a principle is concerned.*

5 a 5-8 μέχρι ... ἀποδιδούς

δή is used to indicate that the consistency of the account up till now is or should be evident to the audience, and as a matter of fact the following 'summary' could be recognized as such easily only by an audience familiar with Peripatetic thought.

The idea behind the use of **ἄρτιος** ("exactly fitted", "complete", and, of number, "even") apparently is that there is a correspondence between the different statements that constitute the λόγος thus far.

The addition of **οἷον** suggests that there is something unusual about the phrase ἄρτιος ὁ λόγος: see *ad* οἷον κοινωνία, 4 a 10. Possibly we have a metaphor here elicited by the use of **λόγος** (like the English 'account') designating both computation and reasoning, that is to say, the different parts of the account are in accordance with one another like a computation which is in balance: the account has, so to speak, been squared. This usage, however, not being attested elsewhere, it appears to be more likely that the application of ἄρτιος to an individual λόγος involves an extension of the use of the term to indicate some form of (intellectual or moral) soundness,[1] based upon a certain balance of thought which avoids extremes:

Hom. *Il.* 14.92 σίγα, μή τίς τ' ἄλλος Ἀχαιῶν τοῦτον ἀκούσῃ / μῦθον, ὃν οὔ κεν ἀνήρ γε διὰ στόμα πάμπαν ἄγοιτο, / ὅς τις ἐπίσταιτο ᾗσι φρεσὶν ἄρτια βάζειν / ...;

Theogn. 946 εἶμι παρὰ στάθμην ὀρθὴν ὁδόν, οὐδετέρωσε / κλινόμενος· χρὴ γάρ μ' ἄρτια πάντα νοεῖν.

Solon 6.4 δῆμος δ' ὧδ' ἂν ἄριστα σὺν ἡγεμόνεσσιν ἕποιτο, / μήτε λίην ἀνεθεὶς μήτε βιαζόμενος· / τίκτει γὰρ κόρος ὕβριν, ὅταν πολὺς ὄλβος ἕπηται / ἀνθρώποις ὁπόσοις μὴ νόος ἄρτιος ᾖ. (Cp. Theogn. 154.)

4.39 παύει δ' (sc. Εὐνομίη) ἔργα διχοστασίης, / παύει δ' ἀργαλέης ἔριδος χόλον, ἔστι δ' ὑπ' αὐτῆς / πάντα κατ' ἀνθρώπους ἄρτια καὶ πινυτά ("prudent").

Also Pind. *Ol.* 6.94 ἄρτια μηδόμενος; cp. also ἀρτίφρων and perhaps ἀρτιεπής (Hes. *Th.* 29 κοῦραι ... ἀρτιέπειαι (sc. the Muses): see below); the

[1] Cp. Ps.-Arist. *Plant.* 815 b 17-9: ἡμεῖς δὲ τὰ τοιαῦτα ὡς φαῦλα ἀποτρεπόμενοι τῷ ὑγιεῖ ἐνστῶμεν λόγῳ.

term is used of a correspondence in thought between two individuals in Hom. *Od.* 19.248 τίεν δέ μιν ἔξοχον ἄλλων / ὧν ἑτάρων Ὀδυσεύς, ὅτι οἱ φρεσὶν ἄρτια ᾔδη.

The aspect of soundness is made explicit in S.E. *Adv. Math.* VII.438 δοκεῖν μὲν ἡμᾶς ἔχειν ἀρτίαν τὴν ψυχὴν καὶ τὸ σῶμα, and even more so in *SVF* III.278 (68.25-9), where it is implied that ἀρτιότης of the soul, in a manner analogous to bodily health, consists in an εὐκρασία τῶν ἐν τῇ ψυχῇ δογμάτων. It should be noted that, in view of μέχρι ... τούτων, the soundness of the λόγος h.l. does not imply *completeness* in addition to harmony of the constituent parts: contrast *Et. Magn.* 150.27 ff. s.v. ἄρτιος: σημαίνει τὸν ὑγιῆ καὶ πεπληρωμένον, and the explanation there of ἀρτιέπειαι (Hes. *Th.*, above): αἱ ἀπηρτισμένα καὶ τέλεια λέγουσαι 150.30 (cp. ἀπηρτισμένον, 8 a 5).
In *HP* ἄρτιος is used with reference to a tree:

> *HP* II.5.5 ὅσα δὲ ἐκ τοῦ στελέχους καὶ διακοπτόμενα φυτεύεται, κάτω τρέποντα τὴν τομὴν δεῖ φυτεύειν, διακόπτειν δὲ μὴ ἐλάττω σπιθαμιαίων, ὥσπερ ἐλέχθη, καὶ τὸν φλοιὸν προσεῖναι. φύεται δὲ ἐκ των τοιούτων ἔρνη· βλαστανόντων δ' ἀεὶ προσχωννύειν (heap up earth about them), ἄχρι οὗ ἂν γένηται *ἄρτιον* ("strong" HORT; "bien formée" AMIGUES; ἀρτιτελῆ (!) conj. WIMMER).

As a matter of fact, although Th. seems to be taking the Aristotelian unmoved mover as a plausible candidate for the first principle, the account will prove to be not quite 'well-balanced' or 'sound' (nor, for that matter, 'square'), since, as will appear later, the Aristotelian principle does not fit in with the fundamental connectedness of the principle; see also *ad* ἁπλῶς ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν, 5 a 9-10.

ἀρχὴν ... ποιῶν **μίαν** is in accordance with what in 4 b 10-1 was stated to be the most likely case, and was adopted in 4 b 15 too (see notes *ad locc.*); **πάντων** explicitly indicates that the principle presides over all other entities collectively as in ἡ πάντων ἀρχή (4 b 15; see also τῶν ἄλλων 4 b 14, ἅπαντα 4 b 16).

For **ἀποδιδούς**, see *ad* ἀποδοῦναι 4 b 17 above; cp.

> *HP* I.2.7 εἰλημμένων δὲ πάντων τῶν μορίων ὡς εἰπεῖν τὰς τούτων διαφορὰς πειρατέον ἀποδιδόναι καὶ τὰς ὅλων τῶν δένδρων καὶ φυτῶν οὐσίας.

As appears from the article (**τὴν** ἐνέργειαν, **τὴν** οὐσίαν), a specific ἐνέργεια and a specific οὐσία involved are assigned to the principle here, apparently consisting in the principle's ἀκινησία, which was assumed in 4 b 22 (see note *ad loc.*). One should realize that h.l. **ἐνέργεια** may be rendered by "activity" only on the understanding that this activity excludes κίνησις: see 7

b 13-5; Th. will question the necessity of dissociating ἐνέργεια from κίνησις in 7 b 15-23.

This introduction of the notion of ἐνέργεια implying absence of motion is self-evident only to those familiar with Peripatetic thought. In contrasting ἐνέργεια with κίνησις—which, being incomplete and imperfect, always involves a τέλος ("end"), and always tends towards a τέλος ("goal")—Aristotle appears to have parted from common usage; for a source, one may quote himself:

> Arist. *Met.* 1047 a 30-2 ἐλήλυθε δ' ἡ ἐνέργεια τοὔνομα, ἡ πρὸς τὴν ἐντελέχειαν συντιθεμένη, καὶ ἐπὶ τὰ ἄλλα ἐκ τῶν κινήσεων μάλιστα· δοκεῖ γὰρ (sc. according to common usage) ἡ ἐνέργεια μάλιστα ἡ κίνησις εἶναι,—but
> 1048 b 28-35 τούτων (sc. processes as e.g. learning and having learnt, becoming healthy and being healthy) δὴ ⟨δεῖ⟩ τὰς μὲν κινήσεις λέγειν, τὰς δ' ἐνεργείας. πᾶσα γὰρ κίνησις ἀτελής, ἰσχνασία ("the process of thinning") μάθησις βάδισις οἰκοδόμησις· αὗται δὲ κίνησεις, καὶ ἀτελεῖς γε. οὐ γὰρ ἅμα βαδίζει καὶ βεβάδικεν, οὐδ' οἰκοδομεῖ καὶ ᾠκοδόμηκεν, οὐδὲ γίγνεται καὶ γέγονεν ἢ κινεῖται καὶ κεκίνηται, ἀλλ' ἕτερον· ἑώρακε δὲ καὶ ὁρᾷ ἅμα τὸ αὐτό, καὶ νοεῖ καὶ νενόηκεν. τὴν μὲν οὖν τοιαύτην ἐνέργειαν λέγω, ἐκείνην δὲ κίνησιν.

In the context of practical science Aristotle took pains to dissociate ἐνέργεια from the characteristic aspect of κίνησις, i.e. that of having (and of tending towards) a τέλος other than itself, in order to explain the condition of eternal bliss ascribed to the divine:

> Arist. *EN* 1154 b 24-8 (οὐκ ἀεὶ δ' οὐθὲν ἡδὺ τὸ αὐτὸ διὰ τὸ μὴ ἁπλῆν ἡμῶν εἶναι τὴν φύσιν, ἀλλ' ἐνεῖναί τι καὶ ἕτερον, καθὸ φθαρτοί,[1] ...·) ἐπεὶ εἴ του ἡ φύσις ἁπλῆ εἴη, ἀεὶ ἡ αὐτὴ πρᾶξις ἡδίστη ἔσται· διὸ θεὸς ἀεὶ μίαν καὶ ἁπλῆν χαίρει ἡδονήν· *οὐ γὰρ μόνον κινήσεώς ἐστιν ἐνέργεια ἀλλὰ καὶ ἀκινησίας*, καὶ ἡδονὴ μᾶλλον ἐν ἠρεμίᾳ ἐστὶν ἢ ἐν κινήσει.[2]

Hence ἐνέργεια, conceived of as eternal activity, which is perfect and therefore does not tend towards a τέλος itself, constitutes the desirable—though unattainable—τέλος of human beings; cp. the inevitable frustration of human life described in

> Arist. *Top.* 146 b 13-9 σκοπεῖν δὲ καὶ εἰ γένεσίς ἐστι πρὸς ὃ ἀποδέδωκεν ἢ ἐνέργεια.[3] οὐδὲν γὰρ τῶν τοιούτων τέλος· μᾶλλον γὰρ τὸ ἐνηργηκέναι καὶ γεγενῆσθαι τέλος ἢ τὸ γίνεσθαι καὶ ἐνεργεῖν. ἢ οὐκ ἐπὶ πάντων ἀληθὲς τὸ

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[1] φθαρτοί Asp.; φθαρτά MSS.
[2] See Th.' criticism in 7 b 10 ff.
[3] "You must also examine whether that in relation to which he has assigned the term is a coming-into-being or an activity", tr. Forster.

τοιοῦτον· σχεδὸν γὰρ οἱ πλεῖστοι ἥδεσθαι μᾶλλον βούλονται ἢ πεπαῦσθαι ἡδόμενοι, ὥστε τὸ ἐνεργεῖν μᾶλλον τέλος ἂν ποιοῖντο τοῦ ἐνηργηκέναι.

The special use of ἐνέργεια in cosmological contexts appears to be inspired by similar motives:[1] ἐνέργεια is adduced as some sort of 'eternal κίνησις', which is ascribed to the ultimate principle, and thus causes the ultimate principle to guarantee the eternity of the cosmos. Along parallel lines to practical activity, 'cosmic activity', being as it is without a τέλος itself, constitutes a τέλος for the rest of the cosmos:

Arist. *Met.* 1050 a 15-23 ἔτι ἡ ὕλη ἔστι δυνάμει ὅτι ἔλθοι ἂν εἰς τὸ εἶδος· ὅταν δέ γε ἐνεργείᾳ ᾖ, τότε ἐν τῷ εἴδει ἐστίν. ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων, καὶ ὧν κίνησις τὸ τέλος (sc. τὰ πρακτικά), διὸ ὥσπερ οἱ διδάσκοντες ἐνεργοῦντα ἐπιδείξαντες οἴονται τὸ τέλος ἀποδεδωκέναι, καὶ ἡ φύσις ὁμοίως. (...) τὸ γὰρ ἔργον τέλος, ἡ δὲ ἐνέργεια τὸ ἔργον,[2] διὸ καὶ τοὔνομα ἐνέργεια λέγεται κατὰ τὸ ἔργον καὶ συντείνει πρὸς τὴν ἐντελέχειαν. ("and tends to have the meaning of 'complete reality' " tr. TREDENNICK).

Accordingly, the first principle can be said to *be* ἐνέργεια (in the sense of "actuality", being equivalent to ἐντελέχεια; cp. 8 a 11, 9 a 4), as in Arist. *Met.* 1072 a 25 ... ἔστι τι ὃ οὐ κινούμενον κινεῖ, ἀΐδιον, καὶ οὐσία καὶ ἐνέργεια οὖσα quoted *ad* 5 a 2-4 and 1071 b 20 δεῖ ἄρα εἶναι ἀρχὴν τοιαύτην ἧς ἡ οὐσία ἐνέργεια.

As has been stated above, in the present passage the use of the article indicates that ἐνέργεια is used in a broader sense, the "activity" of the first principle having been specified earlier as ἀκινησία. Similarly, **οὐσία** is used in the broader sense of essential nature ("being", "essence") as in Arist. *Met.* 1071 b 20, not in a more specific sense ("substance", expressing the specific nature of the first principle) as in Arist. *Met.* 1072 a 25, above.

Thus, although τὴν ἐνέργειαν and τὴν οὐσίαν both denote the immobility ascribed to the principle, ἐνέργεια and οὐσία are not equivalent, the former raising the question of the capacity, the latter that of the essential nature of the principle.[3]

5 a 8-10 ἔτι δὲ ... θειοτέραν.

ἔτι δέ indicates that a new point is being made, and, as a consequence, **διαιρετόν** cannot but refer to spatial divisibility (cp. Arist. *Met.* 1066 b 4: τὸ γὰρ

[1] Cp. SKEMP (1979) 231: "in [*Met.*] Λ 9 the positive value of the ἐνέργεια ἀκινησίας is taken over from ethics"; cp. also p. 240.

[2] "for action is the end [sc. of a πρᾶξις], and action is activity", tr. TREDENNICK. Cp. VERDENIUS (1983) 110 with n. 43.

[3] *Contra* RUDOLPH "*energeia* and *ousia* seem to be used synonymously" (1988) 234 *ad loc.*

διαιρετὸν ἢ μέγεθος ἢ πλῆθος). Thus, next to the principle being devoid of plurality, i.e. of numerical quantity (μίαν 5 a 7), the category of dimension is inapplicable too: as is brought out by the addition of **ποσόν τι**, divisibility would again imply plurality, i.e. a plurality of parts: see also μεριστόν 5 a 11.[1]

The syntax of (ἔτι δὲ ...) **λέγων** is suggestive of this further point having been part of the account given earlier (μέχρι ... τούτων ... ὁ λόγος, 5-6), but this is, strictly speaking, not the case.[2] The absence of extension, however, is inherent in the Aristotelian concept of a first mover; it is based, once again, on the presupposition that the cosmos has eternal existence:

> Arist. *Phys.* 267 b 17-26 διωρισμένων δὲ τούτων, φανερὸν ὅτι ἀδύνατον τὸ πρῶτον κινοῦν καὶ ἀκίνητον ἔχειν τι μέγεθος. εἰ γὰρ μέγεθος ἔχει, ἀνάγκη ἤτοι πεπερασμένον αὐτὸ εἶναι ἢ ἄπειρον. ἄπειρον μὲν οὖν ὅτι οὐκ ἐνδέχεται μέγεθος εἶναι, δέδεικται πρότερον ἐν τοῖς Φυσικοῖς· ὅτι δὲ τὸ πεπερασμένον ἀδύνατον ἔχειν δύναμιν ἄπειρον, καὶ ὅτι ἀδύνατον ὑπὸ πεπερασμένου κινεῖσθαί τι ἄπειρον χρόνον, δέδεικται νῦν. *τὸ δέ γε πρῶτον κινοῦν ἀΐδιον κινεῖ κίνησιν καὶ ἄπειρον χρόνον. φανερὸν τοίνυν ὅτι ἀδιαίρετόν ἐστι καὶ ἀμερὲς καὶ οὐδὲν ἔχον μέγεθος.*
>
> *Met.* 1073 a 5-7 δέδεικται δὲ καὶ ὅτι μέγεθος οὐδὲν ἔχειν ἐνδέχεται ταύτην τὴν οὐσίαν, ἀλλ' ἀμερὴς καί ἀδιαίρετός ἐστιν κ.τ.λ.

It seems, then, that Th. is qualifying the Aristotelian characterization of the first principle: it can be cogently argued that in the case of the first principle divisibility and extension do not apply, but it *cannot* be argued that the principle lacks divisibility and extension; or, to put it in the terms linked together by Aristotle in the passage from the *Physics* quoted above, Th. would reject the qualifications ἀδιαίρετον and ἀμερές,[3] in favour of the characterization of the principle as οὐδὲν ἔχον μέγεθος.

The manner in which the argument is phrased, is not without difficulties. At first sight it seems clear that **ἀλλ**(ά) contrasts ἐξαίρων with μὴ ... λέγων: "without calling it (divisible or quantitative) but simply raising it ...", **μή** going with the participle.

In view, however, of the conclusion of this paragraph another possibility merits consideration, i.e. that μὴ διαιρετὸν μηδὲ ποσόν τι in fact expresses

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[1] It may be noted that in the case of the predicative use of ποσόν the addition of τι is idiomatic, so that R-F' rendering "in not describing it as something divisible or quantitative" is, to say the least, unneccesary.

[2] Since Th. appears to be preoccupied here with making the most of the candidate for a first principle as put forward from I.4 (4 b 6 ff.) onwards, it is unlikely that διαιρετόν and ποσόν τι refer to the doctrine of mathematical principles, as L-M (*ad loc.*) have it. ("Le résumé enrichit cependant la critique d'un argument supplémentaire", *ibid.*)

[3] Cp. Arist. *Met.* 1066 b 17-8 ἀμέριστον ἄρα καὶ ἀδιαίρετον, said of the actually finite.

the ἀπόφασις referred to in 5 a 13 below (it would then be equivalent to Aristotle's ἀδιαίρετον and ἀμερές, above), the suggestion in that case obviously being that the one manner of speaking about the nature of the principle is better than the other. Seen in that light it would be attractive to construe μή rather with διαιρετόν and ποσόν τι: "saying that it is non-divisible and non-quantitative but simply raising it ...". However, apart from the use of ἀλλά in that case involving an anacoluthon, the use of μή seems to go against this interpretation.[1] For, however problematic the distribution of οὐ and μή may be, the following points can be made:

1. If the negation is construed with the participle (μὴ ... λέγων), the use of μή rather than οὐ is imperative, the λόγος being presented as a hypothetical (or at least tentative) solution; in paraphrase "(the account fits) if it does not say that the principle is divisible or quantitative".[2]
2. If an ἀπόφασις would be involved, οὐ would have been as good as, or even better than, μή,[3] in view of passages concerning the form of negations such as e.g. Arist. *Int.* 19 b 28-9, where it is argued that the negation of ἔστιν οὐ δίκαιος ἄνθρωπος is οὐκ ἔστιν οὐ δίκαιος ἄνθρωπος, and

Arist. *Int.* 20 a 20-3 ἀκολουθοῦσι δ' αὗται, τῇ μὲν πᾶς ἐστὶν ἄνθρωπος οὐ δίκαιός ἡ οὐδείς ἐστιν ἄνθρωπος δίκαιος, τῇ δὲ ἔστι τις δίκαιος ἄνθρωπος ἡ ἀντικειμένη ὅτι οὐ πᾶς ἐστὶν ἄνθρωπος οὐ δίκαιος· ἀνάγκη γὰρ εἶναί τινα.
Eur. fr. 831 N. πολλοῖσι δούλοις τοὔνομ' αἰσχρόν, ἡ δὲ φρὴν / τῶν οὐχὶ δούλων ἔστ' ἐλευθερωτέρα.

3. Whereas μή apparently is the negation preferred in the case of generic (or 'distributive') reference:

Antiphon 5.11 ἔπειτα δέ, ὃ πάντας οἶμαι ὑμᾶς ἐπίστασθαι, ἅπαντα τὰ δικαστήρια ἐν ὑπαίθρῳ δικάζει τὰς δίκας τοῦ φόνου, οὐδενὸς ἄλλου ἕνεκα ἢ ἵνα τοῦτο μὲν οἱ δικασταὶ μὴ ἴωσιν εἰς τὸ αὐτὸ τοῖς μὴ καθαροῖς τὰς χεῖρας. ("every court judges cases of murder in the open air, and for good reasons: (...) that the jurors may avoid entering the same building as those whose hands are unclean" tr. MAIDMENT).

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[1] Cp. also the use of λέγειν (instead of εἰπεῖν); see *ad* 9 b 2.

[2] Cp. K-G II.2.178: "οὐ ... negiert objektiv, μή subjektiv, d.h. οὐ wird gebraucht, wenn etwas slechtweg negiert, d.h. als an und für sich nicht seiend bezeichnet wird; μή hingegen, wenn etwas von dem subjektiven Standpunkte des Redenden aus negiert, d.h. also nur in dem Willen oder in der Vorstellung des Redenden nicht seiend bezeichnet wird."; also "Auch bei Partizipien und Adjektiven steht οὐ, wenn sich dieselben in einen Behauptungssatz auflösen lassen ..., oder ihr Begriff durch die Negation in sein Gegenteil verwandelt wird ...; μή hingegen, wenn sich dieselben in einen Nebensatz auflösen lassen, welcher als Negation μή erfordert ...", *ibid.* 198.

[3] Cp. HAMILTON (1899) 31 f.

Plato *Soph.* 257 B 3-8 ὁπόταν τὸ μὴ ὂν λέγωμεν, ὡς ἔοικεν, οὐκ ἐναντίον τι λέγομεν τοῦ ὄντος ἀλλ' ἕτερον μόνον. [ ] πῶς; [ ] οἷον ὅταν εἴπωμέν τι *μὴ μέγα*, τότε μᾶλλόν τί σοι φαινόμεθα τὸ σμικρὸν ἢ τὸ ἴσον δηλοῦν τῷ ῥήματι; [ ] καὶ πῶς;

οὐ apparently indicates more properly the qualification of a definite, concrete object (cp. Hdt. IV.5.1 ἐμοὶ μὲν οὐ πιστὰ λέγοντες, λέγουσι δ' ὦν; III.69.5 τοῦ δὲ μάγου τούτου τοῦ Σμέρδιος Κῦρος ὁ Καμβύσεω ἄρχων τὰ ὦτα ἀπέταμε ἐπ' αἰτίῃ δή τινι οὐ σμικρῇ); cp. also the non-generic use of the adjective in

Arist. *Phys.* 188 a 36 – b 6 ἀλλὰ λευκὸν μὲν γίγνεται *ἐξ οὐ λευκοῦ*, καὶ τούτου οὐκ ἐκ παντὸς ἀλλ' ἐκ μέλανος ἢ τῶν μεταξύ, ... οὐδὲ δὴ φθείρεται εἰς τὸ τυχὸν πρῶτον, οἷον τὸ λευκὸν οὐκ εἰς τὸ μουσικόν, πλὴν εἰ μή ποτε κατὰ συμβεβηκός, ἀλλ' εἰς τὸ μὴ λευκόν, καὶ οὐκ εἰς τὸ τυχὸν ἀλλ' εἰς τὸ μέλαν ἢ τὸ μεταξύ· κ.τ.λ. (this instance shows that a general truth apparently can also be stated by citing a single concrete instance; contrast Plato's *Sophist*, above).

The distinction between generic and concrete reference can be further illustrated by Arist. *Cat.* 12 a 31-4 (νωδόν τε γὰρ λέγομεν οὐ τὸ μὴ ἔχον ὀδόντας, καὶ τυφλὸν οὐ τὸ μὴ ἔχον ὄψιν, ἀλλὰ τὸ μὴ ἔχον ὅτε πέφυκεν ἔχειν); see next note.

In our passage, where a specific λόγος (the account judged to be consistent if meeting specific conditions) is being referred to, one would, therefore, have expected the negation of διαιρετόν and ποσόν τι to be οὐ rather than μή.[1]

The conclusion can only be that the interpretation of μὴ ... λέγων does not only agree with the obvious syntax of this sentence (see *ad* ἀλλά, above), but is also more likely in view of the negation used. This means that the sentence does not explicitly state, and at the most implies an ἀπόφασις as mentioned in the last sentence of this chapter.

The λόγος, then, which assumes one principle, does not even begin to apply the category of quantity as far as divisibility is concerned either; it is simply raised to a higher 'class'.

The phrase **ἐξαίρων**[2] **εἰς ... μερίδα** appears to be a modification of the expression εἰς μέρος/μερίδα τινὸς τιθέναι "put in the class of", "consider as",[3]

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[1] This is no reason to assume that ἀπόφασις in 5 a 13 does not have the 'technical' sense of "negation"; *contra* TRICOT "une telle explication".

[2] Or should we read ἐξαιρῶν? Cp. Proclus *In Parm.* 1074.24-8 ὅλως γὰρ οὐδενὸς τὸ ἓν ἐστι δεκτικόν, ἀλλ' ἐξῄρηται παντὸς τοῦ ὄντος καὶ πάσης μετοχῆς (see following note); see also οὐ κατὰ τὴν ἠρεμίαν τὴν ἀντικειμένην τῇ κινήσει μένειν αὐτό φησιν (sc. Xenophanes), ἀλλὰ κατὰ τὴν ἀπὸ κινήσεως καὶ ἠρεμίας ἐξῃρημένην μονήν 224 FHS&G, quoted *ad* 7 b 9-15, p. 335 below. ἐξαίρων, it seems, is decidedly the *lectio difficilior*.

[3] εἶναι ἔν τινος μέρει "to be as", cp. Isocr. 9.24 ἡγουμένους οὐχ οἷόν τ' εἶναι τὸν τοιοῦτον

vid. LSJ s.v. μέρος IV.3; s.v. μερίς III. The verb ἐξαίρειν ("lift up", "lift off from the earth", but also "raise in dignity", "exalt", "magnify": LSJ s.v.) is used *in malam partem* by Plato *Resp.* 494 D 1 ὑψηλὸν ἐξαρεῖν αὐτόν, σχηματισμοῦ καὶ φρονήματος κενοῦ ἄνευ νοῦ ἐμπιμπλάμενον; *Leg.* 716 A 5 ἐξαρθεὶς ὑπὸ μεγαλαυχίας; *in bonam partem* Hdt. IX.79.1 ἐξάρας γάρ με ὑψοῦ καὶ τὴν πάτρην καὶ τὸ ἔργον, ἐς τὸ μηδὲν κατέβαλες παραινέων νεκρῷ λυμαίνεσθαι, ...

Once again the idea apparently is that by being conceived of in this manner the principle is raised to a higher plan; to put it differently, if μερίς is taken literally as "part", *ἐξαίρειν* would seem, in the context of the unmoved mover, to denote that this part is separate from the whole (see Arist. *MA* 700 b 34-5 θειότερον καὶ τιμιώτερον ἢ ὥστ' εἶναι πρὸς ἕτερον, quoted *ad* ὑπεροχῇ 4 b 14 above): the first principle is, as it were, a separate class basically occupied by a single member (cp. τὸ δὲ πρῶτον ὑπὲρ εἶδός ἐστι, Proclus *In Parm.* 1073.26-7, p. 161 below). For the phrase εἰς (μερίδα) cp.

> Plut. *Vit. Mar.* 29 αὐτὸς (ὁ Μάριος) μὲν γὰρ *εἰς ἀρετῆς καὶ δεινότητος μερίδα* τὸ ψεύσασθαι *τιθέμενος*, λόγον οὐδένα τῶν πρὸς τὴν σύγκλητον ὡμολογημένων ἕξειν ἔμελλε, τὸν δὲ Μέτελλον εἰδὼς βέβαιον ἄνδρα καὶ τὴν "ἀλήθειαν ἀρχὴν μεγάλης ἀρετῆς" κατὰ Πίνδαρον ἡγούμενον, ἐβούλετο τῇ πρὸς τὴν σύγκλητον ἀρνήσει προληφθέντα καὶ μὴ δεξάμενον τὸν ὅρκον εἰς ἀνήκεστον ἐμβαλεῖν πρὸς τὸν δῆμον ἔχθραν.

ἁπλῶς ("simply", "without more ado")[1] expresses the straightforwardness (or, unconditionality) of this proceeding, as opposed to the troublesome complications which are involved in assuming a quantitative existence (above).

Against the background of the Aristotelian concept of an unmoved mover, the superiority of power expressed by **κρείττω** (... μερίδα), which was the most distinctive characteristic of the principle all the time (see *ad* 4 b 6, 5 a 1-2), now has the connotation of *incomparability* of power (see *ad* ὑπεροχῇ 4 b 14, and *ad* ἐξαίρειν, above). For **θειοτέραν** see *ad* γάρ 4 b 15 above.

One may compare

> 271.3-7 FHS&G (= Simpl. *In Phys.* 6.4 234 b 10-20) αἱ μὲν ὀρέξεις καὶ ἐπιθυμίαι καὶ ὀργαὶ σωματικαὶ κινήσεις εἰσὶ καὶ ἀπὸ τούτου τὴν ἀρχὴν ἔχουσιν, ὅσαι δὲ κρίσεις καὶ θεωρίαι, ταύτας οὐκ ἔστιν εἰς ἕτερον ἀν-

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τὴν φύσιν ἐν ἰδιώτου μέρει διαγαγεῖν; or, with ζῆν, Alexis 242.2 K.-A. οὐ θνητὸς οὐδ' ἀθάνατος, ἀλλ' ἔχων τινὰ / σύγκρασιν, ὥστε μήθ' ἐν ἀνθρώπου μέρει / μήτ' ἐν θεοῦ ζῆν, ἀλλὰ φύεσθαι τ' ἀεὶ / καινῶς φθίνειν τε τὴν παρουσίαν πάλιν, / ἀόρατος ὄψιν, γνώριμος δ' ἅπασιν ὤν. (see LSJ s.v.).

[1] Cp. 8 b 13.

αγαγεῖν ἀλλ' ἐν αὐτῇ τῇ ψυχῇ καὶ ἡ ἀρχὴ καὶ ἡ ἐνέργεια καὶ τὸ τέλος, εἰ δὲ δὴ καὶ ὁ νοῦς, *κρεῖττόν τι*[1] *καὶ θειότερον* ἅτε δὴ ἔξωθεν ἐπεισιὼν, καὶ παντέλειος.

5 a 10-3 οὕτω γὰρ ... ἀπόφασις.

γάρ (5 a 10) introduces the explanation of the procedure described in the preceding sentence (and presumably of ἁπλῶς ἐξαίρων κ.τ.λ. in particular): **οὕτω**, i.e. as something incomparably powerful, and divine; for the use of ἀποδιδόναι see *ad* 4 b 17 above.

From a syntactic point of view, οὕτω ... **μᾶλλον** ἀποδοτέον is followed rather unexpectedly by **ἢ** ... ἀφαιρετέον, in that the ἤ-clause not only fails to provide an alternative for οὕτω,[2] but also contrasts ἀποδοτέον with an altogether different kind of proceeding (ἀφαιρετέον). The contrast as such, however, is sufficiently clear: the one principle should be conceived of as being superior beyond comparison, rather than that it should be denied certain (less dignified) characteristics—as if it *were* comparable to other things—i.c. divisibility which virtually is a kind of plurality. (Like ποσόν τι in 5 a 8-9, (τὸ) **μεριστόν** brings out the plurality of parts inherent in divisibility.)

The less appropriate procedure indicated by **ἀφαιρετέον** thus apparently consists in denying the entity those possibilities it might have had. This would involve a στέρησις ("privation") and, in view of the verbal adjectives (τὸ διαιρετὸν καὶ μεριστόν),[3] a στέρησις *ἐνεργειῶν* in particular (which is to be distinguished from a στέρησις ποιοτήτων according to Iambl. *ap.* Simpl. *In Cat.* 394.34-6: καὶ ἀντίκειται τῇ ἀπὸ τοῦ ἔχειν λεγομένῃ ἕξει ἡ στέρησις, καὶ οὐ μόνον ποιοτήτων αἱ στερήσεις, ἀλλὰ καὶ ἐνεργειῶν, ὡς ἡ τυφλότης τῆς τοῦ ὁρᾶν ἐνεργείας καὶ ἡ χωλότης τῆς τοῦ βαδίζειν).

The use of **γάρ** (5 a 12), in indicating that an explanation is following of the value judgment implied by μᾶλλον ... ἤ, implies that the procedure by means of an ἀφαίρεσις (which would involve a στέρησις)[4] is opposed to the

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[1] κρεῖττόν τι μέρος aF; θειότερον τι καὶ κρεῖττον CM. The presence or absence in the MSS. of μέρος might have something to do with the question whether νοῦς 'which comes from outside' can rightfully be called a μέρος of the body. For this question see *ad* 7 b 22-3.

[2] For which cp. 584A.208 FHS&G οὐθὲν γὰρ μᾶλλον οὕτως (sc. θυτέον) ἢ τὰ ἀνάπηρα θυτέον.

[3] As opposed to something like *διαίρεσίν τε καὶ (τὸ ἔχειν) μέρη.

[4] For the negative value of στέρησις, cp. *CP* VI.4.6 ἤδη καὶ φανερὸν ἂν δόξειεν ὡς οὐκ ἔστιν ἁπλῶς μεμερισμένα, τὸ μὲν ὥσπερ φυσικόν, τὸ δ' ὡς ἐν στερήσει καὶ παρὰ φύσιν. Also VI.4.3 σχεδὸν δέ τι παρόμοιόν ἐστι τὸ ζητούμενον καὶ ἐπὶ τῶν ἄλλων ζῴων πρὸς τὸν ἄνθρωπον, πότερα κατὰ φύσιν ἢ κατὰ στέρησις τἆλλα· ... εἰ οὖν ἡ μὲν στέρησις ἐν ἀτελείᾳ τινὶ καὶ ἐνδείᾳ, ταῦτα δὲ καὶ γεννᾷ καὶ ἐκτρέφει τὰ ὅμοια, καὶ ἰσχυρότερα πολὺ τῶν ἑτέρων, οὐκ ἂν εἴησαν κατὰ στέρησιν.

use of an **ἀπόφασις**, which apparently involves mere absence (ἀπουσία); cp. the discussion with regard to ἠρεμία, Ch. V, 7 b 9 ff..

A forerunner of this distinction—which was destined to live on in the Stoic distinction between negative and privative axiomata[1]— may be found in

> Plato *Soph.* 257 B 3 – C 3 ὁπόταν τὸ μὴ ὂν λέγομεν, ὡς ἔοικεν, οὐκ ἐναντίον τι λέγομεν τοῦ ὄντος ἀλλ' ἕτερον μόνον. [ ] πῶς; [ ] οἷον ὅταν εἴπωμέν τι μὴ μέγα, τότε μᾶλλόν τί σοι φαινόμεθα τὸ σμίκρον ἢ τὸ ἴσον δηλοῦν τῷ ῥήματι; [ ] καὶ πῶς; [ ] οὐκ ἄρ', ἐναντίον ὅταν ἀπόφασις λέγηται σημαίνειν, συγχωρησόμεθα, τοσοῦτον δὲ μόνον, ὅτι τῶν ἄλλων τὶ μηνύει τὸ μὴ καὶ τὸ οὗ προτιθέμενα τῶν ἐπιόντων ὀνομάτων, μᾶλλον δὲ τῶν πραγμάτων περὶ ἅττ' ἂν κέηται τὰ ἐπιφθεγγόμενα ὕστερον[2] τῆς ἀποφάσεως ὀνόματα. ("that the use of 'not' (...) indicates something different from the names (...) that follow it, or rather from the things (...), whatever they are, which are referred to by the expression following the negative particle" De Rijk (1986) 170).

It seems to have been developed in the Peripatos:

> Arist. *Met.* 1004 a 9-16 ἐπεὶ δὲ μιᾶς (sc. ἐπιστήμης) τἀντικείμενα θεωρῆσαι, τῷ δ' ἑνὶ ἀντίκειται πλῆθος, ἀπόφασιν δὲ καὶ στέρησιν μιᾶς ἐστὶ θεωρῆσαι διὰ τὸ ἀμφοτέρως θεωρεῖσθαι τὸ ἕν, οὗ ἡ ἀπόφασις (ἢ ἡ στέρησις) ἢ ἁπλῶς λεγομένη ὅτι οὐκ ὑπάρχει ἐκεῖνο, ἢ τινὶ γένει· ἔνθα μὲν οὖν τῷ ἑνὶ διαφορὰ πρόσεστι παρὰ τὸ ἐν τῇ ἀποφάσει (*ἀπουσία γὰρ ἡ ἀπόφασις ἐκείνου (sc. τοῦ ἑνὸς) ἐστίν), ἐν δὲ τῇ στερήσει καὶ ὑποκειμένη φύσις γίγνεται, καθ' ἧς λέγεται ἡ στέρησις*. See also Alexander 253.25 ff. *ad loc.*: ἡ γὰρ στέρησις οὐχ ἁπλῶς ἀπουσία τινός ἐστιν, ὡς ἡ ἀπόφασις, ἀλλ' ἀπουσία τοῦ πεφυκότος ὑπάρχειν ὅτε πέφυκε.
>
> *Cat.* 12 a 26-34 στέρησις δὲ καὶ ἕξις λέγεται μὲν περὶ ταὐτόν τι, οἷον ἡ ὄψις καὶ ἡ τυφλότης περὶ ὀφθαλμόν· καθόλου δὲ εἰπεῖν, ἐν ᾧ πέφυκε ἡ ἕξις γίγνεσθαι, περὶ τοῦτο λέγεται ἑκάτερον αὐτῶν. ἐστερῆσθαι δὲ τότε λέγομεν ἕκαστον τῶν τῆς ἕξεως δεκτικῶν, ὅταν ἐν ᾧ πέφυκεν ὑπάρχειν καὶ ὅτε πέφυκεν ἔχειν μηδαμῶς ὑπάρχῃ. νωδόν τε γὰρ λέγομεν τὸ μὴ ἔχον ὀδόντας, καὶ τυφλὸν οὐ τὸ μὴ ἔχον ὄψιν, ἀλλὰ τὸ μὴ ἔχον ὅτε πέφυκεν ἔχειν· τινὰ γὰρ ἐκ γενετῆς οὔτε ὄψιν οὔτε ὀδόντας ἔχει, ἀλλ' οὐ λέγεται οὔτε νωδὰ οὔτε τυφλά.[3] See also Simpl. 392.15 ff. *ad loc.*: τὸν τοῖχον οὐκ ἄν τις εἴποι τυφλόν, ἐπεὶ μηδὲ ὅλως πέφυκεν ὁρᾶν (392.22-4); ὄψις γὰρ περὶ ζῷον, περὶ

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[1] ἀποφατικόν vs. στερητικόν; see e.g. DL VII.69; Kneale (1962) 146 f.

[2] "It should be noticed that, like German and Dutch, Greek always has 'what-not-is', *etc.*, instead of English 'what is not' *etc.*" De Rijk (1986) 170 n. 10.

[3] But see Arist. *Met.* 1022 b 22-4: στέρησις λέγεται ἕνα μὲν τρόπον ἂν μὴ ἔχῃ τι τῶν πεφυκότων ἔχεσθαι, κἂν μὴ αὐτὸ ᾖ πεφυκὸς ἔχειν, οἷον φυτὸν ὀμμάτων ἐστερῆσθαι λέγεται: *ibid.* 1052 a 1-4 τὸ δὲ ψεῦδος οὐκ ἔστιν, οὐδὲ ἀπάτη, ἀλλὰ ἄγνοια, οὐχ οἷα ἡ τυφλότης· ἡ μὲν γὰρ τυφλότης ἐστὶν ὡς ἂν εἰ τὸ νοητικὸν ὅλως μὴ ἔχοι τις. Guthrie VI.121 n.1: "It is hopeless to expect [Aristotle] to use terms consistently. So long as a word was in popular use in several senses, he would freely use it in all of them".

δὲ ἄψυχον οὐκέτι· οὐκοῦν καὶ ἡ τυφλότης περὶ ζῷον· οὐδεὶς γὰρ ἂν τὸν κίονα τυφλὸν εἴποι (393.27-8).

In his analysis of the different semantic values involved Choeroboscus apparently argued that the use of the ἄλφα στερητικόν may indicate both types of negation:

Choerob. *apud Et. Magn.* 639.45 ff. s.v. οὐδέτερον: οὐδέτερόν ἐστι τὸ μὴ ὂν ἓν ἐκ τῶν αὐτῶν προϋποκειμένων γενῶν, λέγω δὴ τοῦ ἀρσενικοῦ καὶ θηλυκοῦ. εἰ γὰρ εὑρίσκομεν καὶ ἀπὸ τοῦ Α στερητικοῦ ἀρχόμενον, ὡς τὸ ἄφιλος, ἄσεμνος, τί ἄτοπον καὶ ἀπὸ τῆς ἀποφάσεως ἄρχεσθαι τοῦτο;

οὐδὲ γὰρ διαφέρουσιν ἀλλήλων ἥ τε ἀπόφασις καὶ στέρησις, ὅσον κατὰ τὸ εἶναι ἄμφω ἀναιρετικά· εἴτε κατὰ ἄλλον τρόπον διαφέρουσι, καθ' ὃ ἡ μὲν στέρησις, ἐπιβάλλοντος (ἤγουν ἁρμόζοντος) ἐστὶν ἀτευξία, τουτέστιν ἀποτυχία· ὡς ὅταν εἴπωμεν, ἄτεχνος ὁ ῥήτωρ. ἐπιβάλλει μὲν γάρ, (ἤτοι ἁρμόζει,) αὐτὸν τὸ εἶναι ἔντεχνον, οὐκ ἔτυχε δὲ τούτου· ἡ δὲ ἀπόφασις, ὡς ἔτυχε λαμβάνεται· δυνατὸν γὰρ λέγειν Οὐ τεχνικὸς ὁ ὄνος· ἄτεχνος δὲ ὁ ὄνος, οὐ δυνατὸν λέγειν· ἐπειδὴ ... οὐχ ἁρμόζει τῷ ὄνῳ τὸ εἶναι τεχνικόν.

ἀμέλει ἡνίκα ἡ Α στέρησις μὴ σημαίνει ἐπιβάλλοντος ἀποτυχίαν, τότε ἀντὶ ἀποφάσεως λέγουσιν αὐτὴν εἶναι, καὶ παραλαμβάνεται ὡς ἐν τῷ ἀθάνατον, ἄλογον, ἀντὶ τοῦ οὐ θανατούμενον, οὐ λογικόν. οὐδὲ γὰρ ἐστὶν ἐνταῦθα ἐπιβάλλοντος ἀτευξία· οὐ δύνανται γὰρ ὁ ἀθάνατος εἶναι θνητός, οὐδὲ τὸ ἄλογον λογικόν.[1]

Cp., finally, the distinction made by Aristotle, *MA* 703 b 4 ff., between ἀκούσιος ("involuntary", e.g. movements of the heart and the penis) and οὐχ ἑκούσιος ("non-voluntary", e.g. movements like sleep and respiration). The terminology which Th. uses to express his conviction that, as contrasted with the sacrifice of animals, there is no objection to sacrificing fruit, is in accordance with this distinction:

584A.106-8 FHS&G εἰ δὲ λέγοι τις ὅτι οὐχ ἧττον τῶν καρπῶν καὶ τὰ ζῷα ἡμῖν ὁ θεὸς εἰς χρῆσιν δέδωκεν, ἀλλ' ὅτι γε ἐπιθυομένων τῶν ζῴων φέρει τινὰ βλάβην αὐτοῖς, ἅτε τῆς ψυχῆς νοσφιζομένων. οὐ θυτέον οὖν ταῦτα· ἡ γὰρ θυσία ὁσία τίς ἐστι κατὰ τοὔνομα. ... εἰ δὲ οὐδὲ καρποὺς ὁ ἀφελόμενος ἄλλων ὁσίως θύει, τά γε τούτων τιμιώτερα παντελῶς οὐχ ὅσιον ἀφαιρουμένους τινῶν θύειν· τὸ γὰρ δεινὸν οὕτω γίγνεται μεῖζον· ψυχὴ δὲ πολλῷ τιμιώτερον τῶν ἐκ γῆς φυομένων, ἣν ἀφαιρεῖσθαι θύοντα τὰ ζῷα οὐ προσῆκεν. ἀλλ' ἴσως τις ἂν εἴποι ὅτι καὶ τῶν φυτῶν ἀφαιροῦμέν τι ἢ οὔ; οὐχ ὁμοία ἡ ἀφαίρεσις· *οὐ γὰρ παρὰ ἀκόντων.*

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[1] "We are told by Choeroboscus that the negative adverb cannot have a distinctly privative force. ... But the difference is rather to be explained as due to the characterizing force of compounds in general. ἄτεχνος applied to the orator affects his character, not so when it is applied to the ass." HAMILTON (1899) 33 *ad loc.*

In the present passage a similar contrast between two ways of refraining from calling the principle divisible or quantitative (μὴ ... λέγων 5 a 8-9) appears to be made, the ἀφαίρεσις of τὸ διαιρετὸν καὶ μεριστόν as contrasted with the ἀπόφασις, a contrast that corresponds with the ontological contrast between στέρησις and ἀπουσία. The negation does not even begin to apply to the category of quantity, which prevents the first principle from involving a privation and thus a deficiency.

KRAEMER ((1971) 177 n. 306) refers to this passage in connection with the (neo-Platonic) method κατ' ἀφαίρεσιν ('via negationis'),[1] exemplified e.g. by

> Albinus (= Alcinous) 165.14-17 H. ἔσται δὴ πρώτη μὲν αὐτοῦ (sc. τοῦ πρώτου θεοῦ) νόησις ἡ κατὰ ἀφαίρεσιν τούτων, ὅπως καὶ σημεῖον ἐνοήσαμεν κατὰ ἀφαίρεσιν ἀπὸ τοῦ αἰσθητοῦ, ἐπιφάνειαν νοήσαντες, εἶτα γραμμήν, καὶ τελευταῖον τὸ σημεῖον....
>
> ἀμερῆ τε διὰ τὸ μὴ εἶναι πρότερόν τι αὐτοῦ· τὸ γὰρ μέρος καὶ τὸ ἐξ οὗ πρότερον ὑπάρχει τούτου, οὗ μέρος· καὶ γὰρ τὸ ἐπίπεδον πρότερον ἢ τὸ σῶμα, καὶ ἡ γραμμὴ πρότερον ἢ τὸ ἐπίπεδον· μέρη γε μὴν οὐκ ἔχων ἀκίνητος ἂν εἴη κατὰ τόπον καὶ ἀλλοίωσιν. (165.30-4).
>
> Cp. also Arist. *Protr.* B 33 quoted *ad* 4 a 5-6, p. 79 above.

Now, although the procedure rejected here has in common with the method of ἀφαίρεσις that the principle searched for would belong to one and the same series as the other items involved, it notably differs from it in so far as what is being denied to the principle is the *potency* of being divided and having parts; this would involve a στέρησις ἐνεργειῶν, i.e. a privation of δύναμις (in a non-technical sense) in the sphere of τὸ ποιεῖν καὶ πάσχειν, as opposed to a στέρησις ποιοτήτων (see p. 155 above). As contrasted with a privation of qualities, a privation of a potency (even of a less dignified one) amounts to a disqualification —which, of course, is exactly why this possibility is rejected here.[2] Surely, in order to gain knowledge of the first principle the method of abstraction[3] *of δυνάμεις* is an unlikely one.

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[1] See KRAEMER (1964) 105 ff., and cp. his interpretation of δυνάμει τινὶ καὶ ὑπεροχῇ 4 b 14 above.

Cp. MANSFELD (1987) 311-2, *ad* 224.6-7 FHS&G οὔτε πεπερασμένον οὔτε ἄπειρον ... Ξενοφάνην ... ὑποτίθεσθαί φησιν ὁ Θεόφραστος (cp. *ad* 7 b 11-2, p. 334-5 below), where Th. would have meant "er setzt es weder als begrenzt noch als unbegrenzt" (p. 311), which noticeably resembles μὴ διαιρετὸν μηδὲ ποσόν τι λέγων, and as such does not even imply an ἀπουσία (and consequently does not strictly speaking exemplify a qualification according to the *via negationis* either).

In any case the present passage obviously suggests that for Th. a method κατ' ἀφαίρεσιν was distinct from the method proceeding by negation.

[2] See also the rejection of ἀργία 7 b 12-3.

[3] Or 'subtraction': KRAEMER (1964) 106.

The phrase ἅμα ... τε καί has the effect of emphasizing **ἀληθινωτέρῳ**: apart from the negation being appropriate where the highest principle is concerned, it also is more in accordance with reality: cp. Plato *Resp.* 522 A 7-8 ὅσοι μυθώδεις τῶν λόγων καὶ ὅσοι ἀληθινώτεροι ἦσαν, *Tim.* 26 E 4-5 μὴ πλασθέντα μῦθον ἀλλ' ἀληθινὸν λόγον.

Arist. *Rhet.* 1359 b 2-7 καθ' ἕκαστον μὲν οὖν ἀκριβῶς διαριθμήσασθαι καὶ διαλαβεῖν εἰς εἴδη περὶ ὧν εἰώθασι χρηματίζειν, ἔτι δ' ὅσον ἐνδέχεται περὶ αὐτῶν διορίσαι κατὰ τὴν ἀλήθειαν, οὐ δεῖ κατὰ τὸν πάροντα καιρὸν ζητεῖν *διὰ τὸ μήτε τῆς ῥητορικῆς εἶναι τέχνης, ἀλλ' ἐμφρονεστέρας καὶ μᾶλλον ἀληθινῆς*, ...

EN 1107 a 28-32 δεῖ δὲ τοῦτο μὴ μόνον καθόλου λέγεσθαι, ἀλλὰ καὶ τοῖς καθ' ἕκαστα ἐφαρμόττειν· ἐν γὰρ τοῖς περὶ τὰς πράξεις λόγοις οἱ μὲν καθόλου κοινότεροί εἰσιν, οἱ δ' ἐπὶ μέρους *ἀληθινώτεροι*· περὶ γὰρ τὰ καθ' ἕκαστα αἱ πράξεις, δέον δ' ἐπὶ τούτων συμφωνεῖν.

Met. 1008 b 31 – 1009 a 5 (seventh 'proof' against the denial of the law of contradiction) ἔτι εἰ ὅτι μάλιστα πάντα οὕτως ἔχει καὶ οὐχ οὕτως, ἀλλὰ τό γε μᾶλλον καὶ ἧττον ἔνεστιν ἐν τῇ φύσει τῶν ὄντων· οὐ γὰρ ἂν ὁμοίως φήσαιμεν εἶναι τὰ δύο ἄρτια καὶ τὰ τρία, οὐδ' ὁμοίως διέψευσται ὁ τὰ τέτταρα πέντε οἰόμενος καὶ ὁ χίλια.
εἰ οὖν μὴ ὁμοίως, δῆλον ὅτι ἄτερος ἧττον, ὥστε μᾶλλον ἀληθεύει. εἰ οὖν τὸ μᾶλλον ἐγγύτερον, εἴη γε ἄν τι ἀληθὲς οὗ ἐγγύτερον τὸ μᾶλλον ἀληθές. κἂν εἰ μὴ ἔστιν, ἀλλ' ἤδη γέ τι ἔστιν *βεβαιότερον καὶ ἀληθινώτερον*, καὶ τοῦ λόγου ἀπηλλαγμένοι ἂν εἴημεν τοῦ ἀκράτου καὶ κωλύοντός τι τῇ διανοίᾳ ὁρίσαι.

(When used without qualification ἀληθινός is opposed to ψευδής, e.g. Plato *Tht.* 187 C 4 (δόξα), Arist. *SE* 168 a 12, 175 b 2 (ἔλεγχος), *An. Post.* 76 a 28 ἐξ ἀληθινῶν τινῶν συλλογισμὸν καὶ πρώτων ("from any true and primary premisses"); the term is used as a contrast to misconceptions in e.g.

Arist. *HA* 541 a 31 (τοῦτο μὲν οὖν διὰ τὸ πολλάκις ὁρᾶσθαι τὴν δόξαν ἐποίησε τῆς ὀχείας ταύτην 541 a 22-3.) ἡ δ' ἀληθινὴ σύνοδος τῶν ᾠοτόκων ἰχθύων ὀλιγάκις ὁρᾶται διὰ τὸ ταχέως ἀπολύεσθαι παραπεσόντας, ...
(Cp. also *ibid.* 579 b 26 τὸ ἀληθινὸν αἰδοῖον opp. τὸ λεγόμενον.)

Accordingly, ἀληθινός more in general is used of what is genuinely (or, what is properly named) so: e.g. Plato *Phaedr.* 253 D 7 ἀληθινῆς δόξης ἑταῖρος ("of genuine renown", opp. ἀλαζονείας ἑταῖρος E 3);[1] Arist. *Pol.* 1294 a 25 τὴν δὲ τῶν τριῶν ἀριστοκρατίαν μάλιστα τῶν ἄλλων παρὰ τὴν ἀληθινὴν καὶ πρώτην; 1256 b 30 καὶ ἔοικεν ὅ γ' ἀληθινὸς πλοῦτος ἐκ τούτων εἶναι.

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[1] See HACKFORTH *ad loc.*

H.l. ἀληθινωτέρῳ in effect contradicts a possible negative connotation of **ὑψηλοτέρῳ**, implying mere verbalism or making of vain pretences otherwise; cp. e.g.

> Plato *Euth.* 289 E 1 – 4 καὶ γάρ μοι οἵ τε ἄνδρες αὐτοὶ οἱ λογοποιοί, ὅταν συγγένωμαι αὐτοῖς, ὑπέρσοφοι, ὦ Κλεινία, δοκοῦσιν εἶναι, καὶ αὐτὴ ἡ τέχνη αὐτῶν θεσπεσία τις καὶ ὑψηλή.
>
> *Ep.* VII 341 E 1-342 A 1 ἀλλ' οὔτε ἀνθρώποις ἡγοῦμαι τὴν ἐπιχείρησιν περὶ αὐτῶν (i.e. τὰ μέγιστα) λεγομένην ἀγαθόν, εἰ μή τισιν ὀλίγοις ὁπόσοι δυνατοὶ ἀνευρεῖν αὐτοὶ διὰ σμικρᾶς ἐνδείξεως, τῶν τε δὴ ἄλλων τοὺς μὲν καταφρονήσεως οὐκ ὀρθῆς ἐμπλήσειεν ἂν οὐδαμῇ ἐμμελῶς, τοὺς δὲ ὑψηλῆς καὶ χαύνης ἐλπίδος, ὡς σέμν' ἄττα μεμαθηκότας.
>
> Also *Resp.* 494 D 1, see *ad* ἐξαίρων 5 a 9, p. 154 above.

In the present context ὑψηλός does not carry any such derogatory connotations: the negation belongs to the account which is more lofty, in the sense that, as contrasted with the account of the lower entities, it does not imply a deficiency of some kind. In spite of the fact that **λόγος** covers 'speech' as well as 'explanation', there is, therefore, no reason to ascribe to ὑψηλός here the positive *stylistic* value attached to it in e.g. Ps.-Longinus περὶ ὕψους: the negation is preferred merely because of its aptness to render the explanation of the principle which proceeds by ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειότεραν (above).

For the value judgment implied here one may compare a passage in Proclus' commentary on the *Parmenides*. I do not claim fully to comprehend it, but the following points—reformulated here so as to clarify the present discussion—appear to be made: (a) in spite of the common opinion that affirmation is more dignified than negation (δοκεῖ ... πᾶσιν ἡ κατάφασις σεμνοτέρα τῆς ἀποφάσεως εἶναι· στέρησις γὰρ ἡ ἀπόφασις· ἡ δὲ κατάφασις, φασίν, εἴδους παρουσία καὶ ἕξις τίς ἐστιν. Procl. *In Parm.* 1072.21-4 Cousin), some of the different types of ἀποφάσεις actually are better/stronger (κρείττων) than καταφάσεις, i.e. those expressing τὸ μὴ ὄν; (b) there are two kinds of τὸ μὴ ὄν, one that involves the negation of ὄντα, and one that does not involve even this; (c) in the case of the latter, the ἀπόφασις does not have part in any affirmation whatsoever; it relates to all affirmations as a cause; (d) this type of negation is most appropriate in the case of τὸ πρῶτον/τὸ ἕν: it is outside being, and its only relationship to being is that of serving as a cause to all entities.

In spite of the obvious differences, the passage is cited at length—if only to illustrate that the point made in the passage of Th. is by no means as complicated as it might have been:

Proclus *In Parm.* 1072.37-1075.19 Cousin ἐν πᾶσιν ἄρα τοῖς οὖσι κρείττων ἡ κατάφασις ἁπλῶς τῆς ἀποφάσεως. ἐπειδὴ δὲ πολλαχῶς τὸ μὴ ὄν, τὸ μὲν ὡς κρεῖττον τοῦ ὄντος, τὸ δὲ ὡς τῷ ὄντι συνταττόμενον, τὸ δὲ ὡς στέρησις τοῦ ὄντος· δῆλον δήπουθεν ὅτι *τριττὰ καὶ ἀποφάσεων εἴδη θεωρήσομεν*, τὸ μὲν ὑπὲρ τὴν κατάφασιν, τὸ δὲ καταφάσεως λειπόμενον, τὸ δὲ παρισούμενόν πως πρὸς τὴν κατάφασιν. οὐκ ἄρα μονοειδῶς ἡ κατάφασις ἀεὶ τῆς ἀποφάσεως κρείττων, ἀλλ' ἔστιν ὅπου καὶ τὴν δευτέραν ἔλαχε τάξιν, ὅταν ἡ ἀπόφασις *ἐκεῖνο λέγῃ τὸ μὴ ὂν ὅ ἐστιν ἐπέκεινα τοῦ ὄντος*.

ἀλλ' ἐπειδὴ διττὸν καὶ τοῦτο τὸ μὴ ὄν, τὸ μὲν ὑπὸ τοῦ ὄντος κατεχόμενον, τὸ δὲ οὐδενὶ τῶν ὄντων συναριθμούμενον, δῆλον ὡς ἐπὶ τούτου κυρίως οὔτε κατάφασις ἁρμόσειεν ἂν οὔτε ἀπόφασις, ἐπ' ἐκείνου δὲ μᾶλλον ἡ ἀπόφασις, ἔτι καὶ ἡ κατάφασις καθόσον τῷ ὄντι κεκοινώνηκεν. ἀλλ' εἰ καὶ μηδεὶς ἐπὶ ἐκείνου κυρίως λόγος ἀληθὴς (λέγω δὴ τοῦ ἀσυντάκτου πρὸς τὸ ὄν), κυριώτερον ἂν ἡ ἀπόφασις ἐπ' αὐτοῦ ῥηθείη τῆς καταφάσεως. ὡς γὰρ ἐπὶ τῶν ὄντων αἱ καταφάσεις, αἱ ἀποφάσεις ἐπὶ τοῦ μὴ ὄντος· ὅλως γὰρ ἡ κατάφασις εἴδους θέλει δράττεσθαί (lay hold of) τινος, καὶ ὅταν ἡ ψυχὴ ἄλλῳ ἄλλο λέγῃ παρεῖναι καὶ ποιῇ κατάφασιν, τίθησι τῶν ἑαυτῇ συγγενῶν. *τὸ δὲ πρῶτον ὑπὲρ εἶδός ἐστι*, καὶ οὐδὲν αὐτῷ προσήκει τῶν ἐν τοῖς δευτέροις προσάγειν, οὐδὲ τὰ ἐν ἡμῖν οἰκεῖα μεταφέρειν ἐπ' αὐτό·[1] λήσομεν γὰρ ἑαυτοὺς καὶ οὐκ ἐκεῖνο λέγοντες. οὐκ ἄρα καταφάσεσιν ἐπ' αὐτοῦ χρησόμεθα δεόντως, ἀλλὰ μᾶλλον ταῖς τῶν δευτέρων ἀποφάσεσι. καὶ γὰρ αἱ καταφάσεις γινώσκειν τι σπεύδουσιν ἄλλο ἄλλῳ ὑπάρχον· τὸ δὲ πρῶτον καὶ ἄγνωστόν ἐστι ταῖς συμφύλοις πρὸς τὰ ὄντα γνώσεσι, καὶ οὐκ ἔστιν αὐτῷ τι λαβεῖν ὡς ὑπάρχον, ἀλλὰ μᾶλλον ὡς μὴ ὑπάρχον· συνθέσεως γὰρ πάσης ἐξῄρηται[2] καὶ μεθέξεως.[3] καίτοι πρὸς τούτοις. αἱ μὲν καταφάσεις ὡρισμένον τι δηλοῦσιν, *αἱ δὲ ἀποφάσεις ἀόριστον ἔχουσι δύναμιν· τὸ γὰρ οὐκ ἄνθρωπος ἀπειρότερόν ἐστι τοῦ ἄνθρωπος. τὴν οὖν ἀπερίληπτον καὶ ἀπεριόριστον τοῦ ἑνὸς αἰτίαν οἰκειότερόν ἐστιν ἐνδείκνυσθαι διὰ τῶν ἀποφάσεων*· ἀποτεμαχίζουσι γὰρ αἱ καταφάσεις τὰ ὄντα, ἀναπλωτικαὶ δέ εἰσιν αἱ ἀποφάσεις ἀπὸ τῶν περιγεγραμμένων ἐπὶ τὸ ἀπερίγραφον καὶ ἀπὸ τῶν διῃρημένων ὅροις οἰκείοις ἐπὶ τὸ ἀόριστον. *πῶς οὖν οὐχ αὗται μᾶλλον πρέπουσι τῇ θεωρίᾳ τοῦ ἑνός;*

τὴν γὰρ ἀπερίληπτον αὐτοῦ καὶ ἄληπτον καὶ ἄγνωστον ταῖς μερικαῖς ἐπιβολαῖς δύναμιν, εἰ θέμις εἰπεῖν, διὰ τούτων ἐνδείκνυσθαι μόνον δυνατόν· *κρείττους ἄρα τῶν καταφάσεων αἱ ἀποφάσεις*, καὶ πρέπουσαι τοῖς ἀν-

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[1] "The primal entity is, however, above Form, and it is not suitable to apply to it any of those attributes which are proper to secondary things, nor to transfer to it attributes proper to us." (tr. MORROW/DILLON).

[2] ἐξῄρηται suppl. Cousin?—cp. 1074.27-8; STALLBAUM συνθέσεως γὰρ πάσης καὶ μεθέξεως: "Sic Codd. Fortasse deest aliquid.", 842 *ad loc.*

[3] "So then we must use in relation to it not assertions, but rather negations of those attributes which are proper to secondary things. For assertions strive to ascertain that some one thing is true of some other, whereas the First is both inaccessible to cognitions which are related to anything existing, and it is not possible to take anything as applying to it, but rather as not applying to it; for it transcends all compositeness and participation." (tr. MORROW/DILLON).

αγομένοις ἀπὸ τοῦ μερικοῦ πρὸς τὸ ὅλον καὶ ἀπὸ τοῦ κατατεταγμένου πρὸς τὸ ἀκατάτακτον καὶ ἀπὸ τοῦ τετεμαχισμένου τῆς γνώσεως εἴδους ἐπὶ τὸ ἀπεριόριστον καὶ ἑνιαῖον καὶ ἁπλοῦν τῆς ἐνεργείας εἶδος.[1]

1074. 22 ff. πῶς οὖν αὗται (sc. αἱ ἀποφάσεις) καὶ τίνα τρόπον ἐπὶ τῆς πρώτης αἰτίας ἁρμόζουσι, τέταρτον νοήσωμεν. οὐχ οὕτω φαίην ἂν ὡς ἐπὶ τῶν δεκτικῶν μὲν τῆς καταφάσεως, οὐ μέντοι δεδεγμένων, οἷον εἰ τὸν Σωκράτη φαῖμεν μὴ εἶναι λευκόν· *ὅλως γὰρ οὐδενὸς τὸ ἕν ἐστι δεκτικόν, ἀλλ' ἐξῄρηται παντὸς τοῦ ὄντος καὶ πάσης μετοχῆς·* οὐδὲ αὖ οὕτως, ὡς τὸ ἄδεκτον πάντῃ τῆς καταφάσεως, καὶ στέρησιν[2] ἔχον αὐτῆς καὶ ἀμιξίαν πρὸς τὸ εἶδος, οἷον εἴ τις λέγοι τὴν γραμμὴν οὐ λευκόν, διότι δὴ λευκότητός ἐστιν ἀμέτοχος. τὸ γὰρ πρῶτον οὐχ ἁπλῶς ἀπέσπασται τῶν ἀποφασκομένων· *οὐδὲ ἀκοινώνητά ἐστι πάντα ταῦτα πρὸς τὸ ἕν, ἀλλὰ παράγεται ἐκεῖθεν*[3] καὶ οὐχ ὡς ἡ λευκότης οὔτε γεννᾷ τὴν γραμμὴν οὔτε γεννᾶται ἀπ' αὐτῆς, οὕτω καὶ τὰ μετὰ τὸ ἓν οὔτε γεννᾶται ἀπὸ τοῦ ἑνός· ὑφέστηκε γὰρ ἐκεῖθεν. ἀλλ' οὐδὲ οὕτως, ὡς ἂν φαῖμεν κατὰ τὸν μέσον τρόπον τοῦτον λέγεσθαι τὴν ἀπόφασιν, κατὰ τὸν τῶν μὴ δεκτικῶν μέν, ἄλλοις δέ, ἐν οἷς ἐστι, τοῦ δέχεσθαι τὴν κατάφασιν αἰτιῶν. οἷον ἡ κίνησις οὐ κινεῖται, ἀλλὰ τὸ κινούμενον· κατηγωρεῖται γοῦν αὐτῆς ἡ ἀπόφασις· οὐ γὰρ κινεῖται, καὶ εἰ ἄλλα κινεῖται δι' αὐτήν· καὶ ὅλως ἕκαστον τῶν παθῶν ἀπαθές ἐστιν· ἁπλοῦν γὰρ ὂν ἢ ἔστιν ἢ οὐκ ἔστι, τὸ δὲ πάσχον δι' αὐτὸ τὸ σύνθετόν ἐστιν.

οὐδὲ οὕτως οὖν ἀποφάσκεται τὰ ἀποφασκόμενα τοῦ ἑνός· οὐδὲ γὰρ ἐγγίνεται ἑνὶ τὸ ἕν, ἀλλ' αἴτιον μέν ἐστι τῶν καταφάσεων ὧν αὐτῷ προσάγομεν τὰς ἀποφάσεις, *οὐδαμῶς δὲ ἐγγίνεται τούτοις ὧν ἐστιν αἴτιον*·[4] ἀλλ' εἴ με χρὴ συντόμως εἰπεῖν τὸ δοκοῦν, ὥσπερ τὸ ἓν αἴτιόν ἐστι τῶν ὅλων, οὕτω καὶ ἀποφάσεις αἴτιαι τῶν καταφάσεών εἰσιν.

This argument has in common with the present passage that the type of negation that is inferior to affirmation, involving the type of τὸ μὴ ὄν that is a στέρησις τοῦ ὄντος, and applies to something which is δεκτικὸν μὲν τῆς καταφάσεως, οὐ μέντοι δεδεγμένον, does not apply to the first principle. The ἀπόφασις put forward as alternative by Th. seems to share its formal characteristics with the type of negation which, according to Proclus, is to a certain degree on a par with affirmation, involving the type of τὸ μὴ ὄν that is τῷ ὄντι συντασσόμενον, and applies to something which is ἄδεκτον πάντῃ

[1] "So then, negations are superior to assertions, and are suitable to those who are being drawn up from what is partial towards the whole and from the aligned towards the unaligned and from the sliced-up type of knowledge towards that type of activity which is uncircumscribable and unitary and simple". (tr. MORROW/DILLON).

[2] Somewhat confusingly, στέρησις (τῆς καταφάσεως) is used here with reference to what here was called ἀπουσία (as opposed to στέρησις) above.

[3] "For the first principle is not simply deprived of the things that are denied of it, nor are these things without any communion with the One, but they are actyally derived from that source; ..." (tr. MORROW/DILLON).

[4] "So, then, not even in this sense are the negations uttered of the One; for the One does

καταφάσεως. For the principle of Proclus this kind of negation is not good enough: the negation required, which is better than an affirmation, involves τὸ μὴ ὄν, ὅ ἐστιν ἐπέκεινα τοῦ ὄντος (i.e. τὸ οὐδένι τῶν ὄντων συναριθμούμενον); and it applies to something which combines its being, so to speak, outside being (cp. h.l. ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν?), with its function as a cause (in that it causes the entities to *be* related to it somehow, if not *vice versa*). All this appears to be a complication of the opposition between ἀπουσία and στέρησις with which the passage of Th. is concerned, a complication which apparently arises from the requirement that a first principle should be cause to all entities without being affected by them, a problem that is not unfamiliar to the present argument either.

τοῖς λέγουσιν apparently is added as a restriction, in so far as the positive assessment of the account proceeding by means of ἀπόφασις is restricted to those who actually apply this procedure: cp.

> Arist. *GA* 735 a 23-6 ὥστ' εἰ ἡ καρδία πρῶτον ἔν τισι ζῴοις γίγνεται, ἐν δὲ τοῖς μὴ ἔχουσι καρδίαν τὸ ταύτῃ ἀνάλογον, ἐκ ταύτης ἂν εἴη ἡ ἀρχὴ *τοῖς ἔχουσι*, τοῖς δ' ἄλλοις ἐκ τοῦ ἀνάλογον. (see also *ad* 5 b 4).

The fact that this phrase is added seems to indicate that Th. realizes that he is following one particular train of thought; its keystone will be put to the test in the next chapter.

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not come to be in any one thing, but although it is the cause of the assertions of which we apply to it the negations, it in no way comes to be in those things of which it is the cause." (tr. MORROW/DILLON).

CHAPTER TWO

II.1 (5 a 14-23): *The idea of a desire on the part of the things of nature requires further discussion, seeing that the movements of the heavenly bodies are far from uniform. What kind of desire is it, and for which objects? (Rest had better be dropped as a candidate, since it would involve a waste of effort on the part of the heavenly bodies, and is not in evidence anyhow.)*

If it is a single principle, the diversity of movement is left unaccounted for; if there is a plurality of principles, the reality of an all-pervading desire for the best is not evident.

5 a 14-6 τὸ δὲ ... ὑπεναντίαι.

τὸ ... μέτα ταῦτ(α): for the phrase, see *ad* τὸ ... κατὰ τὸ πλῆθος 5 a 21-2. The account in the last two paragraphs of the preceding chapter, involving as a first principle an unmoved mover imparting movement as the object of desire, elicits the question ποία καὶ τίνων (ἡ ἔφεσις): the topic is proleptically stated in **περὶ τῆς ἐφέσεως**. The question represents a subsequent step in the argument in that it concerns the next lower level: if the principle of τὸ ὀρεκτόν is taken for granted, then what about the ἔφεσις involved?
ἤδη indicates that this question is one that is to be answered *now*; cp.

> *Sens.* 49 περὶ ἑκάστης δ' ἤδη τούτων (sc. τῶν αἰσθήσεων) ἐν μέρει πειρᾶται λέγειν.
> *Ign.* 10 τούτου γὰρ τεθέντος εὔλογος ἤδη καὶ ἡ γένεσις καὶ ἡ φθορά.[1]

The phrase **λόγου δεῖται** ("requires discussion/argument")[2] is frequently used when (one's own, or any) suppositions or conclusions are not in accordance with what may be reasonably expected (i.e., when what is supposed to be the case is not φανερόν or εὔλογον: see *ad* ἄτοπον, 5 a 18).

> *Ign.* 6 εἰ δὲ μή ἐστι πῦρ μηδὲ πυρὸς φῶς, αὐτὸ μὲν τοῦτο θαυμαστὸν καὶ λόγου δεῖται.
> *CP* I.11.1-2 τὸ μὲν οὖν πάθος ὅμοιον φαίνεται τοῖς ἐπικυϊσκομένοις ζῴοις, πλὴν αἰτία τοῖς μὲν φανερά, *τοῖς δὲ λόγου δεομένη*. τὰ μὲν γάρ, οὐχ ἅμα

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[1] "With this starting point we can give a coherent account of the generation and destruction of fire" tr. COUTANT.

[2] See e.g. Arist. *Phys.* 254 a 30-1 τὸ ... ζητεῖν λόγον ὧν βέλτιον ἔχομεν ἢ λόγου δεῖσθαι "to seek an argument in a case where we are too well off to require argument" *RevOT*.

λαμβάνοντα τὰς παρ' ἑτέρων ἀρχάς, οὐδ' ἴσως εἰς τὸν αὐτὸν τόπον, οὐδ' ἅμα κυΐσκεται ...· τῶν δὲ διὰ τί ἡ βλάστησις οὐχ ἅμα οὐ ῥᾴδιον εἰπεῖν. ἀνάγκη γὰρ διὰ τὸ τὰς ῥίζας μηδ' ἅμα ἢ μηδ' ὁμοίως ἔχειν, ἢ τοὺς ἀκρεμόνας μὴ δέχεσθαι μηδ' ἐκπέττειν ἐξ ὧν ἡ πρώτη βλάστησις· ταῦτα δὲ *διὰ τί καὶ τίνος ἕνεκα γίνοιτ' ἂν οὐκ εὔλογον εἰπεῖν.*

Th. here notes that the (Aristotelian) solution brought forward in the preceding chapter is in conflict with the very next question presenting itself (see above); **πλείονος**, consequently, means "more than has been given above", i.e. "more than simply assuming a principle which is the object of desire", since this solution leaves unanswered the question of its implementation at the next lower level, that of the ὄρεξις or, as Th. puts it, the ἔφεσις involved.

It has been pointed out that in metaphysical contexts Aristotle does not use ἔφεσις as a near equivalent of ὄρεξις (see TRICOT, REALE *ad loc.*).[1] In fact, ἐφιέναι and ἔφεσις appear to be the more neutral terms (cp. Ps.-Plato *Def.* 413 C 8 βούλησις ἔφεσις μετὰ λόγου ὀρθοῦ· ὄρεξις εὔλογος· ὄρεξις μετὰ λόγου κατὰ φύσιν), and accordingly to be particularly apposite in physical contexts: compare

Arist. *Phys.* 192 a 16 ff. ὄντος γάρ τινος θείου καὶ ἀγαθοῦ καὶ ἐφετοῦ, τὸ μὲν (sc. = στέρησις) ἐναντίον αὐτῷ φαμεν εἶναι, τὸ δὲ (sc. = ὕλη) ὃ πέφυκεν ἐφίεσθαι καὶ ὀρέγεσθαι αὐτοῦ κατὰ τὴν αὐτοῦ φύσιν.

See also Simpl. *In Phys.* 250.22-3 ὃ γάρ ἐστιν ὄρεξις ἐν τοῖς ἐμψύχοις, τοῦτο ἐν τοῖς ἀψύχοις φυσικοῖς δὲ ἔφεσις; in this opposition ('psychic' vs. 'physical' orientation), ἔφεσις appears to be the unmarked term (providing no information about the possible involvement of soul); cp. also ἐφέσει τινὶ καὶ ὀρέξει in 6 a 9, where apparently ὀρέξει is the more specific term.

I fail to see why Th.' use of the term ἔφεσις instead of ὄρεξις should be an indication of his being concerned here with the desiring subject rather than with the object of the desire, this being Aristotle's main concern, as REALE holds (37-8 n.). The difference rather seems to be that in questioning the concept of ὄρεξις on the part of the heavenly bodies Th. starts at the most neutral, physical level; the involvement of soul is one of the complications that will be faced presently: see εἰ δ' ἡ ἔφεσις ἄλλως τε καὶ τοῦ ἀρίστου μετὰ ψυχῆς κ.τ.λ., 5 a 28 ff.

ποία "what kind of ἔφεσις it is": the pivotal point of the theory of τὸ ὀρεκτόν, as will be demonstrated below, leaves many questions to be answered. P and J read ποῖα, which yields an even greater brachylogy ("the

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[1] As SHARPLES (1989) notes, ἔφεσις is Alexander's term in connection with the unmoved mover; he refers to e.g. *Quaest.* 1.1, 3.16 ff. (τὸ ἀίδιον σῶμα καθ' ὁρμὴν καὶ κατ' ἔφεσίν τινος κινούμενον, 3.17; κινηθήσεται δ' ὑπ' αὐτοῦ τὸ θεῖον σῶμα τῷ νοεῖν τὸ αὐτὸ καὶ ἔφεσιν καὶ ὄρεξιν ἔχειν τῆς ὁμοιώσεως αὐτοῦ, 4.1-3); 1.25, 40.10 ff. (see *ad* 5 a 23-5).

tendency, what kind of entities (have it) and to which objects (it is tending)"); for this question one may refer to 5 b 11 διὰ τί τὰ κυκλικὰ μόνον ἐφετικὰ (κ.τ.λ.). As appears from the following ἐπειδὴ κ.τ.λ., however, the questions posed by ποία καὶ τίνων particularly concern the desire on the part of the heavenly bodies (cp. *ἐπιζητήσειεν* 5 b 11, where the discussion is extended to the lower levels of being); the question concerning the kind of ἔφεσις involved appears to be discussed in 5 a 23-8 ((...) πῶς ποτε φυσικὴν ὄρεξιν ἐχόντων ...).

The plural **τίνων** (an 'objective' genitive, *pace* L-M, *ad loc.*) rather disobligingly anticipates the criticism which is to follow, i.e. that the diversity of circular movements would rather lead one to expect a plurality of final causes (αἵ ... ἀρχαὶ πλείους, 5 a 19).

ἐπειδή[1] indicates that this question is called forth by the observations which follow, in a manner obvious to everyone ("seeing that ..."); the plurality and diversity of cosmic movements at first sight do not support the theory of a common ὄρεξις.

Like ἡ κυκλική (sc. κίνησις: see 5 a 3) Th. uses **τὰ κυκλικά** without a corresponding noun, as if it were a *terminus technicus* indicating a particular type of entities (on the analogy of, e.g., τὰ μαθηματικά). No parallel of this use of κυκλικά is to be found in Aristotle, or, as far as I see, in any contemporary or earlier author. The term obviously applies to the heavenly bodies (sc. σώματα), named after their circular movement—which is indeed their relevant feature here. Cp. e.g. Arist. *Cael.* 289 a 30 ὑπὸ τὴν τοῦ κυκλικοῦ[2] σώματος σφαῖραν, with reference to the element of aether.

Jaeger (1938) 20-1 provides a list of a number of "Dynamische Verbaladjektive auf -ικός" (or, "Adjektiva des Vermögens und der Fähigkeit zu etwas") in Plato and Diocles. This type appears to be productive especially in contexts of virtue, craft, and diet—a situation that possibly is to be accounted for by the common characteristic of a δύναμις being involved.

φορά = (loco)motion, ἡ κατὰ τόπον (κίνησις): see e.g. Arist. *Phys.* 260 a 28, *Met.* 1069 b 12. The (circular) motions of the various heavenly bodies are going in opposite directions. The compound **ὑπεναντίαι** might conceivably carry the connotation that the movements occur at different levels: cp. *Vent.* 27 τὰ νέφη τοῖς πνεύμασιν ὑπεναντία φέρεται, corresponding to τὰ νέφη κατώτερα ὄντα φέρουσιν ἐναντίως, *ibid.* It is, however, more likely that the prefix has the effect of neutralizing the technical connotations of the simple ἐναντίος; in Peripatetic contexts the simple ἐναντίος, when applied to

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[1] This is the only occurrence of ἐπειδή in this treatise, against 5 occurrences of ἐπεί.
[2] "i.e. τοῦ κύκλῳ φερομένου" Bonitz s.v. 413 b 13.

κίνησις, implies movement between extremes (ἐναντίον δὲ κατὰ τόπον τὸ κατ' εὐθεῖαν ἀπέχον πλεῖστον, Arist. *Phys.* 227 b 32, cp. 264 b 15),[1] and this clearly is inapposite here: οὐκ ἔστιν ἐναντία κίνησις ἡ κύκλῳ τῇ κύκλῳ Arist. *Cael.* 286 a 3. For the use of ὑπο- to lessen the stringency inherent to ἐναντίος compare

Sud. 21 *ἄτοπον* δ' ἂν ἐκεῖνο δόξειε *καὶ ὥσπερ ὑπεναντίον* εἰ οἱ γυμναζόμενοι καὶ εὖ ἔχοντες εὐίδρωτες καὶ πάλιν οἱ ἀγύμναστοι καὶ κακῶς ἔχοντες καὶ οἱ πεπεμμένην τε καὶ οἱ ἄπεπτον ἔχοντες τὴν τροφήν. οὐκ ἔστι δ' ἄτοπον· οἱ γὰρ γεγυμνασμένοι τῷ μανὰ τὰ σώματα καὶ ἀνεῳγμένους ἔχειν τοὺς πόρους, ...

τρόπον τινά indicates that more could be said about their being (what-is-not-technically-speaking-)opposite (cp. 7 b 19-20, 9 b 6), as might be expected where a plurality of rotating bodies is concerned. It might indicate in particular that Th. wants to pass by questions such as whether the heavenly bodies are actually moving in opposite directions themselves, or their moving in opposite directions is rather a consequence of the retrograde motions of one of the spheres which are supposed to make up sun, moon, and planet.

Plato's *Timaeus* provides an example of the former conception: the cosmos consists of two circles, 'the circle of the same' and 'the circle of the different', which move in opposite directions (36 C). The circle of the different is split up into seven circles (apparently symbolizing the orbits of the sun, the moon, and the five planets,[2] which, again, move in opposite directions: κατὰ τἀναντία μὲν ἀλλήλοις ... ἰέναι τοὺς κύκλους *Tim.* 36 D 4-5, cp. also 38 C-D.[3]

The idea, on the other hand, that the opposite movements of the heavenly bodies are due to the revolving spheres which carry the heavenly bodies,[4] seems to have been part of the cosmological theories of both Eudoxus and Aristotle; see Dicks (1970) 178-88; 196-201. See e.g.

Eudox. Fr. 124, p. 70.4-12 Lass. (= Simpl. *In Met.* 705) τρεῖς μὲν γὰρ σφαίρας καὶ ταύτην (sc. τὴν σελήνην) εἶναι τὰς φερούσας, διότι καὶ τρεῖς αὐτῆς ἐφαίνοντο εἶναι κινήσεις, τούτων δὲ μίαν μὲν τὴν ὁμοίως κινουμένην τῇ τῶν ἀπλανῶν, ἑτέραν δὲ *ἐναντίως* (!) μὲν ταύτῃ, περὶ ἄξονα δὲ στρεφομένην πρὸς ὀρθὰς ὄντα τῷ ἐπιπέδῳ τοῦ διὰ μέσου τῶν ζῳδίων, καθάπερ καὶ ἐφ' ἡλίου, τρίτην δὲ οὐκέτι καθάπερ ἐφ' ἡλίου, ὅτι κατὰ μὲν τὴν θέσιν ὁμοίως, κατὰ δέ γε τὴν κίνησιν οὐχ ὁμοίως, ἀλλ' ἐναντίως μὲν τῇ δευτέρᾳ, τῇ δὲ πρώτῃ φερομένην ἐπὶ ταὐτὰ βραδεῖαν μὲν κίνησιν κινουμένην, περὶ ἄξονα

[1] As indicated below, this point did not trouble Plato.

[2] Cp. Plato *Resp.* 617 A 6-7 ἐν δὲ τῷ ὅλῳ περιφερομένῳ τοὺς μὲν ἐντὸς ἑπτὰ κύκλους τὴν ἐναντίαν τῷ ὅλῳ ἠρέμα περιφέρεσθαι.

[3] On these complicated passages, see Dicks (1970) 116-37.

[4] Arist. *Cael.* 289 b 32-3 τοὺς μὲν κύκλους κινεῖσθαι, τὰ δὲ ἄστρα ἠρεμεῖν καὶ ἐνδεδεμένα τοῖς κύκλοις φέρεσθαι.

δ' οὖν στρεφομένην ὀρθὸν πρὸς τὸ ἐπίπεδον τοῦ κύκλου, ... , *ibid.* 73.10-1 (about the stars) νυνὶ δὲ ἡ τετάρτη σφαῖρα περὶ τοὺς τοῦ ⟨τοῦ⟩ ἀστέρος λοξοῦ κύκλου στρεφομένη πόλους *ἐπὶ τἀναντία* τῇ τρίτῃ ἀπ' ἀνατολῶν ἐπὶ δυσμὰς ...

Arist. *Met.* 1073 b 38 – 1074 a 5 ἀναγκαῖον δέ, εἰ μέλλουσι συντεθεῖσαι πᾶσαι τὰ φαινόμενα ἀποδώσειν, καθ' ἕκαστον τῶν πλανωμένων ἑτέρας σφαίρας μιᾷ ἐλάττονας εἶναι τὰς ἀνελιττούσας (counteracting) καὶ εἰς τὸ αὐτὸ ἀποκαθιστάσας τῇ θέσει τὴν πρώτην σφαῖραν ἀεὶ τοῦ ὑποκάτω τεταγμένου ἄστρου·[1] οὕτω γὰρ μόνως ἐνδέχεται τὴν τῶν πλανήτων φορὰν ἅπαντα ποιεῖσθαι.

It seems that Th. held similar views concerning the celestial spheres—whether he merely used a different terminology or actually modified Aristotle's theory of counteracting spheres:[2]

165C FHS&G (= Simpl. *In De Caelo* 493.17 f.) διὰ τοῦτο οὖν ἐν τρισὶν αὐτὸν φέρεσθαι ἔλεγον σφαίραις, ἃς ὁ Θεόφραστος "ἀνάστρους" ἐκάλει ὡς μηδὲν ἐχούσας ἄστρον καὶ ἀνταναφερούσας μὲν πρὸς τὰς κατωτέρω, ἀνελισσούσας δὲ πρὸς τὰς ἀνωτέρω.

However this may be, the conclusion seems justified that the entire question illustrates the "complications inherent in trying to explain by a geocentric theory phenomena that are really only susceptible of complete explanation on a heliocentric basis", Dicks (1970) 25.

5 a 17 (καὶ τὸ ἀνήνυτον· καὶ οὗ χάριν ἀφανές.)

With the traditional punctuation (ἐπειδὴ πλείω τὰ κυκλικὰ καὶ αἱ φοραὶ τρόπον τινὰ ὑπεναντίαι, καὶ τὸ ἀνήνυτον καὶ οὗ χάριν ἀφανές.) the text fails to make sense, primarily because of **ἀφανές**, which signifies that it is unclear *that* something is the case ("uncertain", "doubtful"; "beyond the evidence of sense": LSJ s.v.) rather than *why* something is the case ("obscure": so R-F); "ἀφανής ... ist das nicht zu Tage liegende, sinnlich vorhandene" (Schmidt III.435). Cp. Heracl. B 54 DK ἁρμονίη ἀφανὴς φανερῆς κρείττων; also

Eudox. Fr. 74, p. 54.17 f. Lass. ἐπὶ δὲ τοῦ ἀεὶ ἀφανοῦς κύκλου τὰ μὲν ἐπ' αὐτοῦ φερόμενα ἄστρα οὐχ ὁρᾶται· ...

Arist. *Cael.* 285 b 22 ὁ ἀφανὴς πόλος (syn. ὁ ἄδηλος ἡμῖν, opp. ὁ ὑπὲρ ἡμᾶς φαινόμενος; ὁ φάνερος)

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[1] "restoring to the same function each time as regard position the first sphere of the planetary body situated below" tr. Dicks (1970) 200.

[2] See Steinmetz (1964) 158-9 with n. 5.

EN 1104 a 13 δεῖ γὰρ ὑπὲρ τῶν ἀφανῶν τοῖς φανεροῖς μαρτυρίοις χρῆσθαι

HP I.6.2 ἔχει δὲ τὴν μήτραν (core) τὰ μὲν μεγάλην καὶ φανεράν, ὡς πρῖνος δρῦς καὶ τἆλλα προειρημένα, τὰ δ' ἀφανεστέραν, οἷον ἐλάα πύξος· οὐ γὰρ ἔστιν ἀφωρισμένην οὕτω λαβεῖν, ἀλλὰ καί φασί τινες οὐ κατὰ τὸ μέσον ἀλλὰ κατὰ τὸ πᾶν ἔχειν· ὥστε μὴ εἶναι τόπον ὡρισμένον· δι' ὃ καὶ ἔνια οὐδ' ἂν δόξειεν ὅλως ἔχειν· ἐπεὶ καὶ τοῦ φοίνικος οὐδεμία φαίνεται διαφορὰ κατ' οὐδέν.

184.22-5 FHS&G (= Philo *De aet. m.* 121) τὴν δὲ Δῆλον καὶ Ἀνάφην ὠνόμασαν δι' ἀμφοτέρων ὀνομάτων πιστούμενοι τὸ λεγόμενον, ἐπειδὴ γὰρ ἀναφανεῖσα δήλη ἐγένετο, ἀδηλουμένη καὶ ἀφανὴς οὖσα τὸ πάλαι.

ἀφανές is, on the one hand, quite appropriate in the case of the final cause (**οὗ χάριν** "that for the sake of which"),[1] since, according to the Aristotelian theory criticized here, the final cause is ἐνέργεια, and thus to be conceived of as ἀκινησία (see *ad* ἐπεὶ δ' ἀκίνητος καθ' αὑτήν 4 b 22 ff.), that is to say, ἠρεμία: see 5 a 24. And yet, all we observe is movement (circular movement at best). For the significance, where our (dis)belief in a final cause is concerned, of what we actually perceive cp. ἐμφαίνει 11 a 14, φαίνεται 11 b 12.

In the case of **τὸ ἀνήνυτον**, on the other hand, ἀφανές is not equally appropriate. ἀνήνυτος (or -στος), "never ending", nearly always carries the connotation of wearisome and useless labour;[2] see ἀνήνυτον ἔργον πράττειν Πηνελόπης, Plato *Phaedo* 84 A 5-6; also

Hom. *Od.* 16.110-1 καὶ σῖτον ἔδοντας / μάψ αὔτως, ἀτέλεστον, ἀνηνύστῳ ἐπὶ ἔργῳ.

Plato *Leg.* 735 B 6-7 (...) διανοούμενος ὡς μάταιος ἂν ὁ πόνος εἴη καὶ ἀνήνυτος περί τε σῶμα καὶ ψυχάς, ...

780 C 8-9 (...) τὸ τῶν παιζόντων, εἰς πῦρ ξαίνειν ("card wool into a fire") καὶ μυρία ἕτερα τοιαῦτα ἀνήνυτα ποιοῦντα δρᾶν, ...

Ps.-Plato *Axioch.* 371 E 8-9 Σισύφου πέτρος ἀνήνυτος, οὗ τὰ τέρματα αὖθις ἄρχει πόνων

Dem. XVI.26 κἂν ᾖ ταῦτα πρόδηλα, οὐδεὶς ὅστις οὐ βουλήσεται παύσασθαι Θηβαίους ἔχοντας τὴν ἀλλοτρίαν· εἰ δὲ μή, πρῶτον μὲν ἐναντίους ἕξομεν πρὸς ἐκεῖνα τούτους εἰκότως, ὅταν ἡγῶνται τὴν ἐκείνων κατοίκισιν αὑτοῖς ὄλεθρον φέρειν, εἶτ' *ἀνήνυτα πράγμαθ'* ἕξομεν αὐτοί· *τί γὰρ ὡς ἀληθῶς ἔσται πέρας*, ὅταν ἀεὶ τὰς μὲν οὔσας πόλεις ἐῶμεν ἀναιρεῖν, τὰς δ' ἀνῃρημένας ἀξιῶμεν οἰκίζειν;

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[1] For the absence of the article cp. Arist. *EN* 1097 a 18 τί οὖν ἑκάστης (sc. τῶν τεχνῶν) τἀγαθόν; ἢ οὗ χάριν τὰ λοιπὰ πράττεται; "Surely that for whose sake everything else is done" *RevOT.*

[2] "ἀνήνυτος bedeutet eigentlich das was nicht weiter kommen, nicht weiter gebracht werden kann, was uns namentlich in unserm Schmerz oder unserer Ungeduld als endlos erscheint" SCHMIDT IV.522.

S.E. *Pyrrh.* II.8 περὶ ἑκάστου δὲ τῶν ἀδήλων ἀνήνυτος γέγονε παρ' αὐτοῖς διαφωνία,[1] II.31 ἵνα τὴν πολλὴν καὶ ἀνήνυτον μάχην παραλίπωμεν ...

—but without the implication of an end being reached:

Emp. B 12 DK ἔκ τε γὰρ οὐδάμ' ἐόντος ἀμήχανόν ἐστι γενέσθαι / καί τ' ἐὸν ἐξ-απολέσθαι ἀνήνυστον καὶ ἄπυστον·[2] / αἰεὶ γὰρ τῇ γ' ἔσται, ὅπῃ κέ τις αἰὲν ἐρείδῃ.

S.E. *Phys.* II.47 τὸ γὰρ κινούμενον ὀφείλει ἀνύειν τι διάστημα, πᾶν δὲ διάστημα διὰ τὸ τὴν εἰς ἄπειρον ἐπιδέχεσθαι τομὴν ἀνήνυτόν ἐστιν, ὥστ' οὐδὲ κινούμενόν τι ἔσται.

As stated earlier, an interpretation such as: "the fact that their motion is never finished (...) is obscure" (tr. R-F) appears to be invalidated by the sense of ἀφανές, which should rather be rendered by "uncertain", "unclear" (in the sense of 'invisible').

Now, the phrase τὸ ἀνήνυτον ... ἀφανές, interpreted as "the endlessness of their rotation is uncertain", *would* in itself make sense, if the point would be that what is based on ἔφεσις or ὄρεξις might seem to be accidental: cp. εἴπερ ἐφέσει τινὶ καὶ ὀρέξει, κατὰ συμβεβηκός 6 a 9-10. This preoccupation with the eternity of the cosmos would, however, be hardly consistent with the second part of the sentence "and the final cause is not to be seen", the point there obviously being that the ἠρεμία which is supposed to be the 'end' of the rotation does not show. In addition, I doubt whether the shift in sense of ἀφανές could be disposed of as being merely a matter of translation.

The use of ἀφανές also makes it unlikely that the point is that *the combination* of ἀνήνυτον and οὗ χάριν is problematic ("the fact that the rotation is without end, and (i.e. taking into account) the end assumed, is uncertain"); apart from καί being very much strained, this situation surely would have been more properly characterized as ἄτοπον instead.

In the light of all this, one might consider emending the text, as a second hand in A appears to have done: τὸ ἀκίνητον (also at the base of the translations by Isḥāq and Tiphernas): see L-M *app. crit.*; this is, of course, attractive in view of 5 a 23-5, and in any case very much the *lectio facilior.* ZELLER II.2.822 n. 5 conjectures ἄριστον (cp. 5 a 28 – b 1); see also REALE *ad loc.*

It is possible, however, to keep the text as it stands, merely by changing the punctuation:[3] if we read καὶ τὸ ἀνήνυτον· καὶ οὗ χάριν ἀφανές, the sentence presents two additional objections to the Aristotelian theory. Apart

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[1] "but about every single object that is non-evident there exists amongst them endless controversy" tr. BURY.

[2] "unvollziehbar und unerhört" DK.

[3] This solution was suggested to me by Professor C.M.J. Sicking.

from the questions regarding the alleged tendency on the part of the heavenly bodies which are called forth by the diversity of movements involved (see ἐπειδὴ πλείω ... ὑπεναντίαι above; the question is developed at greater length in εἴτε γὰρ κ.τ.λ. below), one may also question the assumption that there is a desire for *rest*, in view of the fact that (1) the heavenly bodies in their eternal rotation actually are unable to reach their goal, and (2) the assumed goal does not show anyway.

The conciseness is suggestive of these points having been added as an afterthought. The fact that the following εἴτε γάρ refers back to ἐπειδὴ ... ὑπεναντίαι in 5 a 15-6 (see *ad* πάντα, τὴν αὐτήν next note) from a grammatical point of view, too, points in that direction.

For the phrase cp. LOUIS: "il va de soi que dans des phrases aussi courtes les subordonnées sont rares, même les participiales: l'auteur préfère coordonner ou juxtaposer." (1964) XLIV. LOUIS quotes "περὶ δὲ μυελοῦ" as the shortest sentence in Aristotle's *Historia Animalium* (521 b 4); cp. "καὶ τὸ εὖρος", [Th.] *Sign.* 35.

5 a 17-21 εἴτε γὰρ ... οὐθαμῶς φανερόν.

This sentence explains (γάρ) why the plurality of rotating bodies and their moving in opposite directions (ἐπειδὴ ... ὑπεναντίαι 5 a 15-6) call for further inquiry as to the tendency assumed and the objects to which they are tending. The interposed καὶ τὸ ἀνήνυτον· καὶ οὗ χάριν ἀφανές is ignored grammatically speaking too: **πάντα**, sc. τὰ κυκλικά; **τὴν αὐτήν**, sc. φοράν (or, κίνησιν).

The actual situation to be observed, i.e. the plurality of heavenly bodies and their rotating in opposite directions, makes it hard to accept the theory of a first cause consisting in the 'object of desire', irrespective of whether a single cause or a plurality of causes is assumed: both alternatives (**εἴτε ... εἴτε**) are equally questionable. The alternatives are not presented in parallel constructions: the particular problem involved is formulated in an apodosis and in a **ὥστε**-clause respectively.[1]

In the case of a single first principle (**ἓν τὸ κινοῦν**)—in the preceding chapter this was argued to be the most likely option—the observed diversity of motions would be strange.[2] Cp. Arist. *Cael.* 300 b 31-2 τοῖς δ' ἄπειρα ἐν

[1] H.l. ὥστε κ.τ.λ. takes the place of an apodosis rather than constituting an exceptional instance of "ὥστε in apodosi": R-F *ad loc.*

[2] A similar type of argument, with regard to the motion of the winds, is found in 186A. 6-9 FHS&G (= Alex. Aphr. *In Meteor.* 2.4) (ἀπορῆσαι δ' ἄν τις, εἰ ..., πρῶτον μὲν ὅτι ...;) δεύτερον δέ, εἰ διὰ τοῦτο εἰς τὰ πλάγια κινοῦνται (sc. οἱ ἄνεμοι), διὰ τὴν περιφορὰν τὴν τοῦ

ἀπείρῳ τὰ κινούμενα ποιοῦσιν, εἰ μὲν ἓν τὸ κινοῦν, ἀνάγκη μίαν φέρεσθαι φοράν, ὥστ' οὐκ ἀτάκτως κινηθήσεται, ... **ἄτοπον** signifies that a statement or observation gives reason for surprise of some kind, usually because it is inconsistent with another statement, or in conflict with another observation (in the latter case ἄτοπον often expresses the absurdity of what fails to be εὔλογον: see *ad* εὐλογώτερον 4 a 13, and *ad* ἄλογον 7 a 10). See e.g.

Sud. 7 *ἄτοπον* δ' ἂν δόξειε τοῦτο εἶναι *καὶ ἐναντίωσίν τιν' ἔχον* πρὸς ταῦτα καὶ πρὸς τὸ καθόλου λεχθέν. (Cp. also *ibid.* 21, p. 167 above.)

CP I.16.12 ὥστ' εἴπερ καὶ ἐκεῖνό γε προσαπαιτεῖ πρὸς τὸ βελτίον, καὶ ταῦτα προσδέχοιτ' ἂν ὡς ἂν οἰκεῖα· προσαπαιτεῖν δ' αὐτὴν καὶ ζητεῖν εὔλογον, ἄλλως τε καὶ ἐκ τούτων ἠρτημένην καὶ ἐν τούτοις ἔχουσαν τὰς ἀρχάς· ἐπεὶ κἀκεῖνο τοῖς αὐτομάτοις *ἄτοπον* συμβαίνει *καὶ ὥσπερ παρὰ φύσιν*, τὸ ἐκ τῶν σπερμάτων χείρω γίνεσθαι καὶ ὅλως μὲν ἐξίστασθαι τοῦ γένους· οὐδὲ γὰρ δὴ τοῦτο κατὰ φύσιν, ἀλλ' εἰς τὸ ὅμοιον ἀπογεννᾶν.

I.11.3 (...) διὸ τὸ μερίζεσθαι ⟨καὶ⟩ ἄλλοτ' ἄλλο βλαστάνειν ἄτοπον, καὶ ταῦτ' ἀπὸ μιᾶς ὁρμῆς.

II.17.1 *θαυμασιώτατον* δ' ἂν δόξειεν, *καὶ ὅλως ἄτοπόν τι καὶ παράδοξον* εἶναι, τὸ ἔνια μὴ δύνασθαι βλαστάνειν ἐν τῇ γῇ καὶ σπέρματα καὶ φυτά, καθάπερ ...

II.17.4 ἐπεὶ τό γε ἐμφύεσθαι καὶ ἐν δένδροις καὶ ἐν φυτοῖς ἑτέροις τὸ καὶ ἐν τῇ γῇ φυόμενον *οὐκ ἄτοπον, ἀλλὰ καὶ γινόμενον*, ὥσπερ ὁ κιττὸς ἐν πολλοῖς. (*ἔτι γὰρ τοῦτο παραδοξότερον*, ὅτι ...)

II.17.5 ἀλλὰ τὸ ἐν ἑτέρῳ μόνον φύεσθαι, χαμαὶ δὲ μή, τοῦτ' *ἄτοπον*. προσφιλῆ μὲν γὰρ δὴ ἀλλήλοις καὶ σύμβια, καθάπερ καὶ τὰ ζῷα, καὶ τὰ φυτὰ τάχ' ἂν εἴη· τὸ δ' ὅλως ἐπὶ τῆς γῆς μὴ φύεσθαι *θαυμαστόν*, ἄλλως τε καὶ καρπὸν ἔχον καὶ σπέρμα καὶ ἀπὸ τούτου βλαστάνον. εἰ γὰρ ἦν ἐκ διαφθορᾶς τινος τῶν ἐν τοῖς δένδροις ἡ γένεσις, ὥσπερ ἐν τοῖς ζῴοις ἐγγίνεται τοιαῦτα ζῷα, *λόγον τιν' ἂν εἶχεν*· ἀλλ' οὐκ ἔστιν οὐδὲ γίνεται πλὴν ἀπὸ σπέρματος, ...

Vent. 32 ἐκεῖνο δ' ἂν δόξειεν *ἄτοπον καὶ παράλογον* εἶναι, διὰ τί τῶν ὑψηλῶν τόπων τὰ μὲν προσήνεμα πάντα ἀπνεύματα τυγχάνει, τὰ δ' ἐπισκεπῆ πνευματώδη καὶ οὐ μετρίως, ἀλλὰ σφόδρως, οἷον ...

Ign. 53 γελοία δὲ ὅλως καὶ τούτοις ἡ τοῦ προσπίπτοντος ἀέρος κίνησις. ... ἔτι δ' *ἄτοπος* ὁ περισυρμὸς ὥσπερ κούφων τινῶν καὶ ἐπιπολαίων ἐπόντων. χρῆν γὰρ τοῦτο πανταχόθεν ὁμοίως συμβαίνειν, καὶ πνεύματος ὄντος μείζονος μᾶλλον. νῦν δ' ἐν ταῖς ἀπνοίαις ἀποκορυφοῦται μάλιστα ἡ φλὸξ ἅτε καὶ οὐ κωλυομένη τῷ πνεύματι, ὅπερ διακωλύει τὴν ἐπ' ὀρθὸν φορὰν ἀλλὰ περικλᾷ καὶ μεταρρίπτει. τοῦτο μὲν οὖν *πρὸς τῷ μὴ ἀληθὲς οὐδ' ἄγαν συνετόν*.

See also 5 b 14 and 7 b 23.

παντός, ἔδει καὶ τοὺς ἀνεμοὺς ἀεὶ ἐπὶ ταὐτὰ φέρεσθαι. νῦν δὲ οὐχ οὕτως· εἰσὶ γάρ τινες οἳ καὶ τὴν ἐναντίαν πνέουσι τῇ περιφορᾷ, ὥσπερ οἱ ἀπὸ δυσμῶν ἐπ' ἀνατολὴν πνέοντες.

The picture that would result, i.e. of one and the same cause being responsible for the diversity of movements observed, is not a consistent one. Cp. the use of ἄτοπον with reference to a theory which, conversely, maintains that similar phenomena are due to dissimilar causes:

Sens. 68 *ἄτοπον* δ' ἂν φανείη πρῶτον μὲν τὸ μὴ πάντων ὁμοίως ἀποδοῦναι τὰς αἰτίας, ἀλλὰ βαρὺ μὲν καὶ κοῦφον καὶ μαλακὸν καὶ σκληρὸν καὶ μεγέθει καὶ σμικρότητι καὶ τῷ μανῷ καὶ πυκνῷ, θερμὸν δὲ καὶ ψυχρὸν καὶ τὰ ἄλλα τοῖς σχήμασιν. ἔπειτα βαρέος μὲν καὶ κούφου καὶ σκληροῦ καὶ μαλακοῦ καθ' αὑτὰ ποιεῖν φύσεις ..., θερμὸν δὲ καὶ ψυχρὸν καὶ τὰ ἄλλα πρὸς τὴν αἴσθησιν, ... (69) *ὅλως δὲ μέγιστον ἐναντίωμα* καὶ κοινὸν ἐπὶ πάντων, ἅμα μὲν πάθη ποιεῖν τῆς αἰσθήσεως, ἅμα δὲ τοῖς σχήμασι διορίζειν· ...

87 ἄτοπον δὲ καὶ τοῦτο· πρῶτον μὲν τὸ μὴ πάντα ὁμοίως ἀποδοῦναι μηδὲ ὅσα τοῦ αὐτοῦ γένους. ὁρίσας γὰρ τὸ θερμὸν σχήματι τὸ ψυχρὸν οὐχ ὡσαύτως ἀπέδωκεν.

As a result, the account which holds that a single object of desire is responsible for the movement of the cosmos fails to convince.

The other possibility—which does agree with the diversity of movements to be observed—is that each heavenly body would have its own individual cause of movement (**καθ' ἕκαστον ἕτερον** sc. τὸ κινοῦν), with the result that there would be a plurality of principles; for the use of single **τε** to add something that follows naturally from what preceeds see K-G II.2.242; for the inference, cp. 4 b 18-22. For the idea that one eternal movement requires a single unmoved mover as a cause, see Aristotle's argument in favour of a plurality of unmoved movers:

Arist. *Met.* 1073 a 26-34 ἐπεὶ δὲ τὸ κινούμενον ἀνάγκη ὑπό τινος κινεῖσθαι, καὶ τὸ πρῶτον κινοῦν ἀκίνητον εἶναι καθ' αὑτό, καὶ τὴν ἀΐδιον κίνησιν ὑπὸ ἀϊδίου κινεῖσθαι *καὶ τὴν μίαν ὑφ' ἑνός*, ὁρῶμεν δὲ παρὰ τὴν τοῦ παντὸς τὴν ἁπλῆν φοράν, ἣν κινεῖν φαμὲν τὴν πρώτην οὐσίαν καὶ ἀκίνητον, ἄλλας φορὰς οὔσας τὰς τῶν πλανήτων ἀϊδίους ..., *ἀνάγκη καὶ τούτων ἑκάστην τῶν φορῶν ὑπ' ἀκινήτου τε κινεῖσθαι καθ' αὑτὴν καὶ ἀϊδίου οὐσίας.*

On the other hand, it is, in the case of a plurality of objects of desire, obscure in what sense the heavenly bodies can be said to act in accordance with *the best* desire (**ὄρεξιν ... τὴν ἀρίστην**): 'so many stars, so many minds' would seem to be a more appropriate way of characterizing the situation. For the use of **ἰέναι εἰς** ("set out to obey") cp.

Ps.-Arist. *Spir.* 481 a 18 καθαρώτερον γὰρ ὃ τῇ ψυχῇ συμφυές, εἰ μὴ καὶ τὴν ψυχὴν ὕστερον λέγοι γίνεσθαι, διακρινομένων τῶν σπερμάτων καὶ εἰς φύσιν ἰόντων.[1]

Thuc. I.121.2 κατὰ πολλὰ δὲ ἡμᾶς εἰκὸς ἐπικρατῆσαι, πρῶτον μὲν πλήθει προύχοντας καὶ ἐμπειρίᾳ πολεμικῇ, ἔπειτα ὁμοίως πάντας ἐς τὰ παραγγελλόμενα ἰόντας.[2]

The phrase εἰς ὄρεξιν ἰέναι seems to be used to emphasize that this desire is not arbitrary, but after some well-defined object. τὴν ἀρίστην brings out the problem involved (hence its emphatic position): in this hypothetical situation each of the heavenly bodies would be following its own desire corresponding to its own individual ἀρχή, whereas only one desire can be (for) the best.[3]

τὸ σύμφωνον represents the situation one would expect to find on the basis of the theory of a desire 'for the best', i.e. a concord of unanimous aspirations on the part of the heavenly bodies; cp. e.g.

Plato *Symp.* 187 B 4 – C 2 (Eryximachus:) ἡ γὰρ ἁρμονία συμφωνία ἐστίν, συμφωνία δὲ ὁμολογία τις—ὁμολογίαν δὲ ἐκ διαφερομένων, ἕως ἂν διαφέρωνται, ἀδύνατον εἶναι· διαφερόμενον δὲ αὖ καὶ μὴ ὁμολογοῦν ἀδύνατον ἁρμόσαι—ὥσπερ γε καὶ ὁ ῥυθμὸς ἐκ τοῦ ταχέος καὶ βραδέος, ἐκ διενηνεγμένων πρότερον, ὕστερον δὲ ὁμολογησάντων γέγονε.

If one observes the diversity of circular movements, however, this unanimity is by no means evident (**οὐθαμῶς φανερόν**). Although, therefore, the second possibility *does* agree with the facts of observation, it calls in question the very idea of a desire for the best shared by all.
A similar argument is found in

Plot. *Enn.* V.1.9 εἰ δὲ ἕκαστον (sc. τῶν νοητῶν) ἀρχή, κατὰ συντυχίαν αἱ ἀρχαὶ ἔσονται· καὶ διὰ τί συνέσονται[4] καὶ πρὸς ἓν ἔργον τὴν τοῦ παντὸς οὐρανοῦ συμφωνίαν ὁμονοήσει;

where Plotinus is raising objections against Aristotle's theory of a plurality of first principles; in fact JAEGER (1923) 376 may be right in arguing that in

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[1] "when the seeds are sorted out and move towards the development of their nature" *RevOT.*

[2] "because we all obey as one man the orders given to us" tr. JOWETT; "Der Ausdruck bezeichnet trefflich den κόσμος der dorischen Zucht" CLASSEN-STEUP *ad loc.*

[3] This interpretation, to my mind, obviates the difficulties raised by L-M (*ad loc.*) to the effect that "le désir n'est pas l'objet du désir, et il est difficile de prêter un désir au moteur immobile lui-même (...).", in consequence of which they construe εἰς ὄρεξιν with τὸ σύμφωνον (αὐτῶν) and interpret τὴν ἀρίστην (sc. φοράν) as an internal object of ἰόντων: "il s'ensuit que leur accord en matière de désir, quand ils suivent la meilleure [des translations], n'est absolument pas manifeste." (tr.).

[4] συνεργήσει Harder.

this passage Plotinus "eine schlagende Kritik der Lehre gegeben [hat], die die schon von Theophrast erhobenen Bedenken weiter ausführt."

In cosmological contexts Aristotle (as far as I can see) uses σύμφωνος/συμφωνία exclusively with reference to Pythagorean theories:[1] *DA* 406 b 30-1 (...) τὸ πᾶν φέρηται συμφώνους φοράς (Timaeus), and, actually involving a 'music of spheres'[2]

Arist. *Cael.* 290 b 12-5 φανερὸν δ' ἐκ τούτων ὅτι καὶ τὸ φάναι γίνεσθαι φερομένων ἁρμονίαν, ὡς συμφώνων γινομένων τῶν ψόφων, κομψῶς μὲν εἴρηται καὶ περιττῶς ὑπὸ τῶν εἰπόντων, οὐ μὴν οὕτως ἔχει τἀληθές. (Also 291 a 9 συμφωνίαν τῶν φερομένων.)

It could be argued that in the present context the use of τὸ σύμφωνον is an obvious choice because of its use in Pythagorean theories of cosmic movement. What Th. has in mind, however, rather seems to be a picture of 'social' harmony based on unanimity or agreement, as supposedly implied by the Aristotelian theory of a desire for the best shared by all heavenly bodies. Furthermore, there is no trace of numerical ratios (nor, for that matter, of any *qualitative* difference, as in the case of the ὁμολογία ἐκ διαφερομένων described in Plato *Symp.* 187 B quoted above: the disharmony of the heavenly bodies is in their behaviour only).[3]

Contra SKEMP "τὸ σύμφωνον αὐτῶν εἰς ὄρεξιν ἰόντων τὴν ἀρίστην (...) suggests the Pythagorean harmony of the spheres forcibly imposed on the Eudoxean or Callippean scheme in an attempt to meet the very difficulty Theophrastus states. He finds the attempt unsatisfying." (1969) 220 (with his n. 7).

In the present passage, Th. is using the term merely in order to show that the Aristotelian theory of a desire for the best (again note the emphatic αὐτῶν εἰς ὄρεξιν ἰόντων *τὴν ἀρίστην*) also fails to satisfy if one assumes a plurality of principles: the idea of a desire for the best clearly requires a single, super-

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[1] For the use in *De Mundo* 396 b 7, see *ad* 8 a 4, p. 354 below.

[2] On the idea of a musical harmony of the spheres see e.g. KAHN (1974) 176 ff.

[3] As a matter of fact, I think that, if the aspect of music *would* be relevant here, a chorus in want of a leader (i.e. a *single* leader; opp. (αἱ ἀρχαὶ) πλείους), who might bring it into harmony, would be a more apposite image: cp. the analogy between God and the leader of a chorus e.g. in *De Mundo* 399 a 12 ff. (a significant difference again being that in the passage of Th. a 'concord' of individual heavenly bodies does not imply qualitative differences which might produce a (polyphonous) harmony): μία δὲ ἐκ πάντων ἁρμονία συνᾳδόντων καὶ χορευόντων κατὰ τὸν οὐρανὸν ἐξ ἑνός τε γίνεται καὶ εἰς ἓν ἀπολήγει, κόσμον ἐτύμως τὸ σύμπαν ἀλλ' οὐκ ἀκοσμίαν ὀνομάσασα. καθάπερ δὲ ἐν χορῷ κορυφαίου κατάρξαντος συνεπηχεῖ πᾶς ὁ χορὸς ἀνδρῶν, ἔσθ' ὅτε καὶ γυναικῶν, ἐν διαφόροις φωναῖς ὀξυτέραις καὶ βαρυτέραις μίαν ἁρμονίαν ἐμμελῆ κεραννύντων, οὕτως ἔχει καὶ ἐπὶ τοῦ τὸ σύμπαν διέποντος θεοῦ. κατὰ γὰρ τὸ ἄνωθεν ἐνδόσιμον ὑπὸ τοῦ φερωνύμως ἂν κορυφαίου προσαγορευθέντος κινεῖται μὲν τὰ ἄστρα ἀεὶ καὶ ὁ σύμπας οὐρανός, πορεύεται δὲ διττὰς πορείας ὁ παμφαὴς ἥλιος, ...

ior principle to bring into harmony the heavenly bodies each striving after their own individual goal. Opting for the alternative of a plurality of principles, though it would suit the situation observed comparatively well, amounts to throwing away the baby with the bathing water.

It is to be noted that the use of τὸ σύμφωνον is firmly embedded in the suggested possibility of a theory of cosmic desire for a plurality of unmoved principles (εἴτε καθ' ἕκαστον ἕτερον 5 a 19). What, therefore, is not at issue here is the possible solution of the concord required being produced by a single internal binding force, and Skemp (*l.c.*) is right in arguing that there is no trace of Stoic conceptions in the present passage.[1]

Further on in this treatise Th. will use the term in a similar context but with quite a different application: in Ch. V, where he is questioning the idea of an unmoved mover, Th. puts forward as alternative for the concept of an external unmoved principle the idea of a harmonious coherence between the different parts of the cosmos: see ὅπως ὅτι μάλιστα σύμφωνον ἑαυτῷ καὶ ἀπηρτισμένον, ὡς ἂν πόλις ἢ ζῷον, 8 a 4-5.

Finally it should be noted that in the present context one obviously is not supposed to take into account the fifth element of aether, which could provide an (Aristotelian) solution by explaining the circular movement as the natural motion common to all heavenly bodies, a conception which is notoriously inconsistent with the theory of cosmic desire at all events.[2]

Thus, in the light of the theory under discussion, the situation observed is strange; on the other hand, if one observes the actual situation, one does not find evidence for the theory under discussion.

5 a 21-3 (τὸ δὲ ... τῶν ἀστρολόγων.)

This sentence again has the nature of an insertion—or, at least, of an afterthought—in so far as the issue of the number (or even plurality) of spheres was brought up solely by the discussion concerning the diversity of movements of the heavenly bodies. If this treatise in fact originally had the status of lecture-notes, the issue will certainly not have come completely out of nowhere. However that may be, the impression of an insertion (possibly in-

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[1] For which one might have referred to *SVF* III.3.29 ff. (Chrys.) μέρη γάρ εἰσιν αἱ ἡμέτεραι φύσεις τῆς τοῦ ὅλου. διόπερ τέλος γίνεται τὸ ἀκολούθως τῇ φύσει ζῆν· ὅπερ ἐστὶ κατά τε τὴν αὑτοῦ καὶ κατὰ τὴν τῶν ὅλων, οὐδὲν ἐνεργοῦντας ὧν ἀπαγορεύειν εἴωθεν ὁ νόμος ὁ κοινός, ὅσπερ ἐστὶν ὁ ὀρθὸς λόγος *διὰ πάντων ἐρχόμενος*, ὁ αὐτὸς ὢν τῷ Διΐ, καθηγεμόνι τούτῳ τῆς τῶν ὄντων διοικήσεως ὄντι. εἶναι δ' αὐτὸ τοῦτο τὴν τοῦ εὐδαίμονος ἀρετὴν καὶ εὔροιαν βίου, ὅταν πάντα πράττηται *κατὰ τὴν συμφωνίαν τοῦ παρ' ἑκάστῳ δαίμονος πρὸς τὴν τοῦ ὅλου διοικητοῦ βούλησιν*.

[2] See e.g. Jaeger (1923) 156 f., Guthrie VI.264 f.

tended to mark an excursus) remains, all the more so as ἐχόντων in 5 a 24 again refers to the heavenly bodies (see αὐτῶν ... ἰόντων in 5 a 20).

For the phrase **τὸ ... κατὰ** (τὸ πλῆθος) "the question concerning ...", cp. Hdt. I.31 τὰ κατὰ τὸν Τέλλον and I.214 τὰ ... κατὰ τὴν Κύρου τελευτήν. According to HINDENLANG (1910) 61 "der substantivierende Gebrauch des Artikels" is uncommonly frequent in Th.; see e.g. *HP* I.6.9 τὸ κατὰ γῆς "that which is underground", and τὸ ... μετὰ ταῦτ' 5 a 14 above.

The phrase **τῆς αἰτίας** μείζονα **ζητεῖ λόγον** probably involves a conflation of the notion λόγος τῆς αἰτίας ("account of the cause", "explanation": e.g. Arist. *GA* 769 b 28) and of the phrase ζητεῖ λόγον "calls for discussion" (e.g. Arist. *GC* 318 a 32 ζητεῖ γάρ τινα λόγον).[1] The explanation of the number of spheres (**πλῆθος** could be simply "plurality",[2] but cp. Arist. *Met.* 1074 a 14 f. τὸ μὲν οὖν πλῆθος τῶν σφαιρῶν ἔστω τοσοῦτον) assumed by the astronomers seems to have been in quantitative terms only. **οἱ ἀστρόλογοι** apparently refers to Eudoxus and Callippus in particular, who also feature as οἱ μαθηματικοί called in for help by Aristotle in *Met.* 1073 b 3 ff. (τὸ δὲ πλῆθος ἤδη τῶν φορῶν ἐκ τῆς οἰκειοτάτης φιλοσοφίᾳ τῶν μαθηματικῶν ἐπιστημῶν δεῖ σκοπεῖν, ἐκ τῆς ἀστρολογίας). See

> Simpl. *In De Caelo* 492.31-493.8 (εἴρηται ... ὅτι) ὁ Πλάτων ταῖς οὐρανίαις κινήσεσι τὸ ἐγκύκλιον καὶ ὁμαλὲς καὶ τεταγμένον ἀνενδοιάστως ἀποδιδοὺς πρόβλημα τοῖς μαθηματικοῖς προὔτεινε, τίνων ὑποτεθέντων δι' ὁμαλῶν καὶ ἐγκυκλίων καὶ τεταγμένων κινήσεων δυνήσεται διασωθῆναι τὰ περὶ τοὺς πλανωμένους φαινόμενα, καὶ ὅτι πρῶτος Εὔδοξος ὁ Κνίδιος ἐπέβαλε ταῖς διὰ τῶν ἀνελιττουσῶν καλουμένων σφαιρῶν ὑποθέσεσι. Κάλλιππος δὲ ... συσχολάσας τῷ Εὐδόξῳ γνωρίμῳ μετ' ἐκεῖνον εἰς Ἀθήνας ἐλθὼν τῷ Ἀριστοτέλει συγκατεβίω τὰ ὑπὸ τοῦ Εὐδόξου εὑρεθέντα σὺν τῷ Ἀριστοτέλει διορθούμενός τε καὶ προσαναπληρῶν· ...
>
> 497.14-22 ὡς εἶναι κατὰ Κάλλιππον τὰς πάσας πεντάκις πέντε καὶ δὶς τέσσαρας, τούτεστι τριάκοντα καὶ τρεῖς σφαίρας. οὔτε δὲ Καλλίππου φέρεται σύγγραμμα *τὴν αἰτίαν τῶν προθετέων τούτων σφαιρῶν* λέγον, οὔτε

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[1] The phrase ζητεῖν λόγον is used more often with a personal subject "seek an argument/ explanation": e.g. Arist. *Met.* 1006 a 13 f. γελοῖον τὸ ζητεῖν λόγον πρὸς τὸν μηθενὸς ἔχοντα λόγον; also *Phys.* 254 a 31 quoted *ad* 5 a 14, p. 164 n. 2 above.

[2] In that case Aristotle could certainly be given the credit of having provided a 'more substantial account' than the (or, for that matter, any) astronomers (see *ad* γε, below): see *Cael.* 292 b 25 ff. περὶ δὲ τῆς ἀπορίας ὅτι κατὰ μὲν τὴν πρώτην μίαν οὖσαν φορὰν πολὺ πλῆθος συνέστηκεν ἄστρων (sc. the plurality of fixed stars attached to the first heaven), τῶν δ' ἄλλων χωρὶς ἕκαστον εἴληφεν ἰδίας κινήσεις, δι' ἓν μὲν ἄν τις πρῶτον εὐλόγως οἰηθείη τοῦθ' ὑπάρχειν· *νοῆσαι γὰρ δεῖ τῆς ζωῆς καὶ τῆς ἀρχῆς ἑκάστης πολλὴν ὑπεροχὴν εἶναι τῆς πρώτης πρὸς τὰς ἄλλας*, εἴη δ' ἂν ἤδε συμβαίνουσα κατὰ λόγον· ἡ μὲν γὰρ πρώτη μία οὖσα πολλὰ κινεῖ τῶν σωμάτων τῶν θείων, αἱ δὲ πολλαὶ οὖσαι ἓν μόνον ἑκάστη· τῶν γὰρ πλανωμένων ἓν ὁτιοῦν πλείους φέρεται φοράς. *ταύτῃ τε οὖν ἀνισάζει ἡ φύσις καὶ ποιεῖ τινὰ τάξιν, τῇ μὲν μιᾷ φορᾷ πολλὰ ἀποδοῦσα σώματα, τῷ δ' ἑνὶ σώματι πολλὰς φοράς.*

Ἀριστοτέλης αὐτὴν προσέθηκεν, Εὔδημος δὲ συντόμως ἱστόρησε, τίνων φαινομένων ἕνεκα ταύτας προσθετέας εἶναι τὰς σφαίρας ᾤετο. λέγειν γὰρ αὐτόν φησιν, ὡς, εἴπερ οἱ μεταξὺ τροπῶν τε καὶ ἰσημεριῶν χρόνοι τοσοῦτον διαφέρουσιν, ὅσον Εὐκτήμονι καὶ Μέτωνι ἐδόκει, *οὐχ ἱκανὰς εἶναι τὰς τρεῖς σφαίρας* ἑκατέρῳ πρὸς τὸ σώζειν τὰ φαινόμενα διὰ τὴν ἐπιφαινομένην δηλονότι ταῖς κινήσεσιν αὐτῶν ἀνωμαλίαν.

"It does not appear that Eudoxus speculated upon the causes of these rotational motions or the way in which they were transmitted from one sphere to another" HEATH (1913) 196.

The qualification **μείζονα** (... λόγον) "a more substantial account"[1] presumably points to the need of a more integrated approach of the question of the number of spheres, i.e. of an account of the phenomena that exceeds the level of calculations and pays attention to the functional aspects involved; this at any rate would seem to be in accordance with the fact that the present criticism concerns the astronomers in particular.

Despite the ellipsis, the purport of **οὐ γὰρ ὅ ... τῶν ἀστρολόγων** is sufficiently clear—esp. owing to the comparative μείζονα (... λόγον)—, and there is no need to supply ⟨ἀρκεῖ⟩ as R-F do (or, ⟨λόγος ἱκανός ἐστιν⟩: JAEGER (1923) 374 n. 1); in view of 7 b 18-9 below one might equally well suggest ⟨ἀξιόπιστος⟩ (or, -ον; cp. ⟨ἀξιόλογον⟩, R-F *app. crit.*). The limitation involved in (ὅ) **γε** implies a contrast; compare

HP IV.9.3 (about the water-chestnut:) ἴδιον δὲ παρὰ τἆλλα τὸ τῶν παραφυομένων ἐκ τοῦ καυλοῦ τριχωδῶν· οὔτε γὰρ φύλλα ταῦτα οὔτε καυλός· ἐπεὶ *τό γε παραβλαστήσεως* κοινὸν καλάμου καὶ ἄλλων ("for *the phenomenon of sidegrowths* is common to reeds and other plants").

IV.14.10 οἱ δὲ καρποὶ σκωληκοῦνταί (get worm-eaten) τινων, οἷον ἐλάας ἀπίου μηλέας μεσπίλης ῥοάς. καὶ *ὅ γε τῆς ἐλάας σκώληξ* ἐὰν μὲν ὑπὸ τὸ δέρμα γένηται διαφθείρει τὸν καρπόν, ἐὰν δὲ τὸν πυρῆνα διαφάγῃ ὠφελεῖ.

IV.7.8 καὶ τὰ μὲν ἐν τῇ ἔξω θαλάττῃ δένδρα *τά γε νῦν τεθεωρημένα* σχεδὸν τοσαῦτά ἐστιν.

V.1.2 (about oak-wood) πᾶν γὰρ ὅμοιόν ἐστιν ἐγκαρδίῳ· πλὴν *τό γε τῆς ἁλιφλοίου* (sea-bark oak) καὶ τότε φαῦλον.

Sens. 54 ἀλλ' ἴσως τὴν ἔμφασιν ὁ ἥλιος ποεῖ τὸ φῶς ὥσπερ ⟨ἀκτῖνα⟩ ἐπιφέρων ἐπὶ τὴν ὄψιν, καθάπερ ἔοικε βούλεσθαι λέγειν (sc. Democritus). ἐπεὶ *τό γε τὸν ἥλιον ἀπωθοῦντα ἀφ' ἑαυτοῦ καὶ ἀποπληττόμενον πυκνοῦν τὸν ἀέρα*, καθάπερ φησιν, ἄτοπον· διακρίνειν γὰρ πέφυκε μᾶλλον.

This contrast seems to concern the account of the astronomers on the one hand and, presumably, that of Aristotle on the other, who in his effort to determine the number of spheres apparently did take into account their

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[1] Cp. 7 b 18-9 μείζω τινὰ αἰτίαν, opposed to λογῶδες.

mechanical interrelation: see Arist. *Met.* 1073 b 38 ff. ἀναγκαῖον δέ, εἰ μέλλουσι *συντεθεῖσαι πᾶσαι* τὰ φαινόμενα ἀποδώσειν, and οὕτω γὰρ μόνως ἐνδέχεται τὴν τῶν πλανητῶν φορὰν *ἅπαντα* ποιεῖσθαι (1074 a 4-5)[1] quoted *ad* 5 a 14-6; cp. HULTSCH *RE* II (1896) 1841. Thus, Th. seems to give Aristotle credit for his effort towards a coherent approach, an effort which, at the same time, he did not find altogether satisfactory.[2]

Although, as in 9 b 24, a contrast is implied between an astronomical explanation and an explanation that takes into account the nature of the whole, I do not see that the present passage involves a contrast between *the task of* astronomers and that of philosophers as distinct professional groups: "Quant à la question de la quantité des sphères, elle appelle un argument plus développé pour [en expliquer] la cause. Car celui-ci du moins ne relève pas des astronomes." (tr. L-M; "Elle doit être donnée par les philosophes.", *ad loc.*). Both groups do give an explanation (*μείζονα* ... λόγον). If the point would be that this *kind* of explanation does not belong to the task of astronomy, this would have been expressed, I think, by οὐ γὰρ τῶν αστρολόγων (or οὐ γὰρ τοῦτο τῶν ...) rather.

II.2 (5 a 23-8): *If the heavenly bodies are supposed to have a natural desire for the unmoved principle, why are they actually pursuing movement instead? On this view, the hypothesis of a final cause consisting in ἠρεμία appears to be redundant. Why, then, should the theory of an imitation on the part of the natural entities involve an ultimate principle characterized by rest, viz. the One? (This regards the adherents of the One and those of numbers alike.)*

5 a 23-5 ἄπορον δὲ ... τὴν κίνησιν.

τὰ κυκλικά apparently is the grammatical subject of this sentence. The genitive 'absolute' φυσικὴν ὄρεξιν **ἐχόντων** is somewhat unexpected in itself and may have been induced by the use of the same case in αὐτῶν (... ἰόντων) in 5 a 20; the impression is thus strengthened that the intervening remark about the number of spheres is not fully integrated in the context; see preceding note.

In the present treatise (adverbial) **καί** is quite frequently used to present a problem that follows next:

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[1] "for only thus can all the forces at work produce the motion of the planets" *RevOT.*

[2] For a modern rejection of Aristotle's solution from a functional point of view see HANSON (1963), who argues that "the idea that 55 spheres can achieve what Aristotle wants, even 'redundantly', *is demonstrably false*. The required observations can be generated either within a system of 49 spheres, or within one comprising 61 spheres—the latter being preferable from an 'Aristotelian' point of view. A 55 sphere system simply cannot work at all; it is kinematically impossible." (223).

5 b 10 τάχα δὲ καὶ τοῦτ' ἄν τις ἐπιζητήσειεν, ...
7 b 5-6 καὶ ταῦτα μὲν ἐνταῦθά που ζητεῖ τὴν σκέψιν, ...
7 b 9-10 ἐν δὲ ταῖς ἀρχαῖς ... εἰκότως ἄν τις καὶ περὶ τῆς ἠρεμίας ἀπορήσειεν· ...
7 b 23 ἄτοπον δὲ καὶ τὸ ἕτερον λεχθέν, ...
8 a 8 ἐπιποθεῖ δέ τινα καὶ τὰ τοιάδε λόγον, ...
8 a 21 δόξειεν δ' ἂν καὶ τοῦτ' ἔχειν ἀπορίαν, ...
9 b 1-2 ἦ καὶ τοῦτ' ἄπορον ...
9 b 16-7 χαλεπὴ δὲ καὶ εἰς αὐτὸ τοῦθ' ἡ σύνεσις καὶ ἡ πίστις, ...
11 a 3 ἐπεὶ καὶ τὰ τοιάδε ἔχει τινὰ δισταγμὸν ...

The problem brought forward here concerns the inconsistency between, on the one hand, the alleged physical (or, 'natural') desire of the heavenly bodies and, on the other, the observation that they appear to pursue not the supposed goal (rest) but movement. **ἄπορον** often expresses a question raised by something ἄλογον—or, ἄτοπον, for that matter—, the latter being the case here, since an inconsistency rather than an implausibility is involved: see *ad* ἄτοπον 5 a 18; cp. 9 b 2 ἦ καὶ τοῦτ' ἄπορον ἢ οὐ ῥᾴδιόν γε εἰπεῖν, μέχρι πόσου καὶ τίνων ζητητέον αἰτίας. It is, however, also used to express an impasse which is not based on inconsistent assumptions or paradoxical facts; see αὐτὸ γὰρ τοῦτο ἄπορον τὸ μὴ ἔχειν λόγον 10 b 24.

To repeat, the problem brought forward here concerns the inconsistency that the heavenly bodies, whilst allegedly having a 'natural' desire for rest, do not pursue rest, but movement. In fact, the use of **διώκειν** constitutes an unmistakable inconsistency, since, like ὀρέγεσθαι, διώκειν denotes the pursuit of some goal[1] and not the obedient (or unconscious) following of an authority, which would rather have been expressed by ἀκολουθεῖν: e.g.

Plato *Resp.* 474 B 7 ἐνδεικνύμενος ὅτι τοῖς μὲν προσήκει φύσει ἅπτεσθαί τε φιλοσοφίας ἡγεμονεύειν τ' ἐν πόλει, τοῖς δ' ἄλλοις μήτε ἅπτεσθαι ἀκολουθεῖν τε τῷ ἡγουμένῳ.
Arist. *Meteor.* 366 a 7 συνεχὴς γὰρ οὖσα ἡ ἀναθυμίασις ἀκολουθεῖ ὡς ἐπὶ τὸ πολὺ τῇ ὁρμῇ τῆς ἀρχῆς, ...[2]
(also *EN* 1149 b 5, below).

For διώκειν compare

Arist. *Pol.* 1284 a 19 αὗται (sc. αἱ δημοκρατούμεναι πόλεις) γὰρ δὴ δοκοῦσι διώκειν τὴν ἰσότητα μάλιστα πάντων
DA 431 a 9 ὅταν δὲ ἡδὺ ἢ λυπηρόν (sc. τὸ αἰσθάνεσθαι), οἷον καταφᾶσα ἢ ἀποφᾶσα, διώκει ἢ φεύγει· καὶ ἔστι τὸ ἥδεσθαι καὶ λυπεῖσθαι τὸ ἐνεργεῖν τῇ αἰσθητικῇ μεσότητι πρὸς τὸ ἀγαθὸν ἢ κακόν, ᾗ τοιαῦτα.

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[1] "syn ἐφίεσθαι, αἱρεῖσθαι, ἀγαπᾶν, opp φεύγειν" Bonitz s.v.
[2] "follows its initial impulse" tr. Lee.

So here the point seems to be that the heavenly bodies, although they do have a desire for the unmoved mover, do not in fact pursue its specific characteristic (**τὴν** ἠρεμίαν), but merely its (type of) movement which is, at least, ἄπαυστος (see *ad* 5 a 2-4). **τὴν** κίνησιν probably is to be interpreted as "the particular movement involved", i.e. κυκλοφορία.

Alternatively, the article in both cases may be accounted for by the fact that, as natural substances, the heavenly bodies have a free choice between movement and rest: see e.g.

Arist. *Phys.* 192 b 20 ff. (...) ὡς οὔσης τῆς φύσεως ἀρχῆς τινὸς καὶ αἰτίας τοῦ κινεῖσθαι καὶ ἠρεμεῖν ἐν ᾧ ὑπάρχει πρώτως καθ' αὑτὸ καὶ μὴ κατὰ συμβεβηκός. (also *ibid.* 13 f. τὰ μὲν γὰρ φύσει ὄντα πάντα φαίνεται ἔχοντα ἐν ἑαυτοῖς ἀρχὴν κινήσεως καὶ στάσεως).

ἠρεμία actually is the proper term for ἀκινησία on the part of entities capable of movement: see *Phys.* 202 a 5.

The suggestion of this sentence obviously is that the difficulty in particular lies in a *natural* desire being involved (**φυσικὴν** ὄρεξιν), presumably because this kind of desire involves an inner drive to acquire what is wanting:

Arist. *EN* 1118 b 15-9 ἐν μὲν οὖν ταῖς φυσικαῖς ἐπιθυμίαις ὀλίγοι ἁμαρτάνουσι καὶ ἐφ' ἕν, ἐπὶ τὸ πλεῖον· τὸ γὰρ ἐσθίειν τὰ τυχόντα ἢ πίνειν ἕως ἂν ὑπερπλησθῇ, ὑπερβάλλειν ἐστὶ τὸ κατὰ φύσιν τῷ πλήθει· *ἀναπλήρωσις* γὰρ *τῆς ἐνδείας ἡ φυσικὴ ἐπιθυμία.*

1149 b 4-8 ἔτι ταῖς φυσικαῖς μᾶλλον συγγνώμη ἀκολουθεῖν ὀρέξεσιν, ἐπεὶ καὶ ἐπιθυμίαις ταῖς τοιαύταις μᾶλλον ὅσαι κοιναὶ πᾶσι, καὶ ἐφ' ὅσον κοιναί· ὁ δὲ θυμὸς φυσικώτερον καὶ ἡ χαλεπότης τῶν ἐπιθυμιῶν τῶν τῆς ὑπερβολῆς καὶ τῶν μὴ ἀναγκαίων, ...

The fact that the heavenly bodies appear to pursue movement instead of rest is at variance with the idea that a natural desire for rest is involved; in other words, it is problematic how it is that entities, while being subject to an inner drive for some one thing, in fact pursue what constitutes the second best. For **πῶς ποτε** ("how it is, that ...") cp.

307A.2-8 FHS&G περὶ μὲν οὖν τοῦ δυνάμει (sc. νοῦ) τάδε φησίν (sc. Θεόφραστος)· "ὁ δὲ νοῦς *πῶς ποτε* ἔξωθεν ὢν καὶ ὥσπερ ἐπίθετος ὅμως συμφυής; καὶ τίς ἡ φύσις αὐτοῦ; τὸ μὲν γὰρ μηδὲν εἶναι κατ' ἐνέργειαν, δυνάμει δὲ πάντα, καλῶς, ὥσπερ καὶ ἡ αἴσθησις. οὐ γὰρ οὕτως ληπτέον ὡς οὐδὲ αὐτός (ἐριστικὸν γάρ)· ἀλλ' ὡς ὑποκειμένην τινὰ δύναμιν καθάπερ καὶ ἐπὶ τῶν ὑλικῶν. ἀλλὰ τὸ ἔξωθεν ἄρα οὐχ ὡς ἐπίθετον, ἀλλ' ὡς ἐν τῇ πρώτῃ γενέσει συμπεριλαμβανόμενον θετέον ...".

In this kind of 'scientific' contexts ποτε ("um das Verlangen des Fragenden nach Aufschluss ... zu bezeichnen" K-G II.2.518) noticeably tends to occur

especially where apparent inconsistencies or fundamental questions are involved. Cp.

Ign. 8 διὰ ταῦτα μὲν φαίνεται κοινὰ καὶ δεόμενα διορισμοῦ, πῶς ποτε χρὴ τὰ ἁπλᾶ λέγειν.

For the Aristotelian theory that the unmoved object of desire inspires circular movement (instead of rest), see

Arist. *Met.* 1072 b 8 φορὰ γὰρ ἡ πρώτη τῶν μεταβολῶν, ταύτης δὲ ἡ κύκλῳ· ταύτην δὲ τοῦτο (sc. τὸ κινοῦν ἀκίνητον ὄν) κινεῖ.

Also 1073 a 26-34 (τὴν τοῦ παντὸς τὴν ἁπλῆν φοράν, ἣν κινεῖν φαμὲν τὴν πρώτην οὐσίαν καὶ ἀκίνητον, ... ἀΐδιον γὰρ καὶ ἄστατον τὸ κύκλῳ σῶμα) quoted *ad* 5 a 17-21, p. 173 above.

See also *ad* 5 a 2-4. That circular movement, being without an end, *is, in a sense*, ἠρεμία, was argued in

Arist. *Phys.* 265 a 27 – b 8 εὐλόγως δὲ συμβέβηκε τὸ τὴν κύκλῳ μίαν εἶναι καὶ συνεχῆ, καὶ μὴ τὴν ἐπ' εὐθείας. τῆς μὲν γὰρ ἐπ' εὐθείας ὥρισται καὶ ἀρχὴ καὶ τέλος καὶ μέσον, ... · τῆς δὲ περιφεροῦς ἀόριστα· τί γὰρ μᾶλλον ὁποιονοῦν πέρας τῶν ἐπὶ τῆς γραμμῆς;[1] ὁμοίως γὰρ ἕκαστον καὶ ἀρχὴ καὶ μέσον καὶ τέλος—ὥστ' ἀεί τε εἶναι ἐν ἀρχῇ καὶ ἐν τέλει καὶ μηδέποτε.[2] διὸ *κινεῖταί τε καὶ ἠρεμεῖ πως ἡ σφαῖρα*· τὸν αὐτὸν γὰρ κατέχει τόπον. αἴτιον δ' ὅτι πάντα συμβέβηκε ταῦτα τῷ κέντρῳ—καὶ γὰρ ἀρχὴ καὶ μέσον τοῦ μεγέθους καὶ τέλος ἐστίν, ὥστε διὰ τὸ ἔξω εἶναι τοῦτο τῆς περιφερείας οὐκ ἔστιν ὅπου τὸ φερόμενον ἠρεμήσει ὡς διεληλυθός (ἀεὶ γὰρ φέρεται περὶ τὸ μέσον, ἀλλ' οὐ πρὸς τὸ ἔσχατον), διὰ δὲ τὸ τοῦτο *μένειν ἀεί τε ἠρεμεῖ πως τὸ ὅλον καὶ κινεῖται συνεχῶς*.

The inference made h.l. to the effect that, if the object of desire inspires rotation rather than rest, the desire is not so much for rest, as for circular movement—a rest *manqué*—[3] is made also by Alexander:

Alex. *Quaest.* I.25, 40.10 ff. καὶ ἐπεὶ πᾶν τὸ κατὰ ψυχὴν κινούμενον ἐφέσει τινὸς ἢ ἀποστροφῇ κινεῖται, καὶ τὸ κυκλοφορητικὸν δὲ σῶμα κατὰ ψυχὴν κινεῖται τὴν κίνησιν τὴν κύκλῳ, ἣ μόνη κινήσεων πασῶν ἀΐδιός τέ ἐστι καὶ συνεχὴς καὶ ὁμαλή τις, δῆλον ὡς καὶ τοῦτ' εἴη ἂν ἐφέσει τινὸς αὐτῷ κινούμενον. ἀλλὰ μὴν ⟨εἰ⟩ πᾶσα σωματικὴ οὐσία ὑστέρα τοῦ σώματος ἐκείνου, οὐδενὸς τούτων ἐφέσει κινεῖσθαι οἷόν τε αὐτό. τῆς ἄρα πρώτης οὐσίας ἀιδίου τε καὶ ἀκινήτου λείπεται ἐφιέμενον αὐτὸ κινεῖσθαι τὴν ἀΐδιον περι-

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[1] "for why should any point on the line be a limit rather than any other?" *RevOT.*

[2] "so that they are both always and never at a beginning and at an end" *RevOT.*

[3] Cp. Arist. *Cael.* 292 b 11-3 (see also *ad* 5 b 13-4) τὸ δ' οὐδ' ἐγχειρεῖ, ἀλλ' ἱκανὸν εἰς τὸ ἐγγὺς τοῦ ἐσχάτου ἐλθεῖν, exemplified by creatures who cannot attain health itself, but merely running or reduction of flesh, *so that for such a being one of these is the end* (καὶ τούτων θάτερον τέλος αὐτοῖς).

φοράν. *ἡ δ' ἔφεσις αὐτῷ οὐ τοῦ λαβεῖν αὐτό, ἀλλὰ τοῦ ὁμοιωθῆναι κατὰ δύναμιν αὐτῷ, ὁμοιοῦται δ' αὐτῷ κατὰ τὴν κίνησιν* (τῷ τε ἀιδίῳ καὶ τῇ ὁμοιότητι καὶ ὁμαλότητι τῆς κινήσεως· στάσει γὰρ ἔοικέ πως ἡ περιφορὰ ἡ ἀεὶ κατὰ τὰ αὐτὰ καὶ ὡσαύτως ἔχουσα)· ἔτι τε ὁμοίωσίς ἐστι τῷ τελείῳ καὶ ἡ καθόλου ἣν δύναται ἕκαστον τῶν ὁμοιοῦ⟨σθαι ἐφιε⟩μένων αὐτῷ ⟨τελειοῦσθαι⟩ τελειότης, τελειότης δὲ τοῦ κυκλοφορητικοῦ σώματος ἡ τοιαύτη περιφορά.

—Apart, then, from the problems involved in the diversity of circular movements which were brought up in the preceding paragraph, the tendency involved in itself also raises the question of how it is that this inner drive for rest does pursue not its end but rather what constitutes the second best, rotation. The question at issue here differs from that raised on second thoughts in καὶ τὸ ἀνήνυτον· καὶ οὗ χάριν ἀφανές, 5 a 17.[1] There the point was made that, ἠρεμία being assumed to constitute their goal, (1) the heavenly bodies fail to reach this goal, and (2) it does not show anyway (see note *ad loc.*). Here the point is made, more fundamentally, that as far as the heavenly bodies are concerned, the goal pursued is *not* ἠρεμία, but circular motion, with the result that, as far as ἔφεσις on the part of the heavenly bodies is concerned, a final cause consisting in ἠρεμία appears to be redundant. It seems that Th. is making the very same point against Aristotle that Aristotle himself had made against Plato in *EE* I, 1218 a 30-1:

> τό τε φάναι πάντα τὰ ὄντα ἐφίεσθαι ἑνός τινος ἀγαθοῦ οὐκ ἀληθές· ἕκαστον γὰρ ἰδίου ἀγαθοῦ ὀρέγεται, ὀφθαλμὸς ὄψεως, σῶμα ὑγιείας, οὕτως ἄλλο ἄλλου.

Speaking in terms of ὄρεξις, it would suffice to say that the heavenly bodies, too, merely desire their own particular good (sc. κυκλοφορία).

Objections against this possible way out of the problem will be brought forward in the next paragraph.

5 a 25-8 τί οὖν ... (... τὸ ἕν.)

οὖν indicates that the inconsistency between the supposed 'natural' desire (or, inner drive) for ἠρεμία and the actual pursuit of κυκλοφορία naturally leads to the following question: compare

> 556 FHS&G ἔτι, φησὶν ὁ Θεόφραστος, τριχῶς τὸ ψεῦδος· ἢ γὰρ ὡς ἦθος ἐπίπλαστον ἢ ὡς λόγος ἢ ὡς πρᾶγμά τι ὄν. κατὰ τί οὖν, φησίν, ἡ ἡδονὴ ψευδής;
>
> 320A.1-6 FHS&G ἀψάμενος δὲ καὶ τῶν περὶ τοῦ ποιητικοῦ νοῦ διωρισμένων Ἀριστοτέλει, "ἐκεῖνο", φησίν, "ἐπισκεπτέον, ὃ δή φαμεν ἐν πάσῃ φύσει τὸ

[1] *Contra* L-M *ad* 5 a 17: "l'aporie sera précisée en 5a23-8".

μὲν ὡς ὕλην καὶ δυνάμει, τὸ δὲ αἴτιον καὶ ποιητικόν, καί, ὅτι ἀεὶ τιμιώτερον τὸ ποιοῦν τοῦ πάσχοντος καὶ ἡ ἀρχὴ τῆς ὕλης." ταῦτα μὲν ἀποδέχεται, διαπορεῖ δέ· "*τίνε οὖν* αὗται αἱ δύο φύσεις; καὶ τί πάλιν τὸ ὑποκείμενον ἢ συνηρτημένον τῷ ποιητικῷ; ...".

The reference of **ἐκεῖνο** is not unambiguous: "this assertion" tr. R-F, (ἐκεῖνος "generally with reference to what has gone immediately before" LSJ s.v.); but τὴν κίνησιν R-F (comm.), TRICOT, REALE. The latter is less likely in so far as of two things mentioned before, ἐκεῖνος "prop(erly) belongs to *the more remote*, in time, place, or thought" (opp. οὗτος): LSJ s.v.[1] The same objection applies to USENER's interpretation of ἐκεῖνο: "i.e. τὸ φυσικὴν ὄρεξιν ἔχοντα κινεῖσθαι".[2] Seen in that light, ἠρεμία appears to be the more likely reference.

See e.g.

CP II.7.2 ἡ μὲν (sc. ἐλάτη) γὰρ χαίρει παλισκίοις, ἡ δὲ πεύκη τοῖς προσείλοις, ἐν ἐκείνοις (sc. = τοῖς παλισκίοις) δὲ οὐ φύεται πάμπαν ἢ κακῶς.

6 b 19 συμβαίνει δὲ τοὐναντίον ἢ ἐν ταῖς ἄλλαις μεθόδοις· ἐν ἐκείνοις γὰρ ... ('the more remote in thought': cp. ἔνθα opp. ἐν ... ταῖς λοιπαῖς, 6 b 21-2).[3]

If the postulate of ἠρεμία being the object of desire can be called in question if what is in fact pursued is κυκλοφορία, then exactly the same applies to the μίμησις of the One: why should one assume this particular end, if what is in fact imitated is not unity but 'order in plurality'? Among the adherents of mathematical principles, too, one encounters the conception that there is a tendency towards an end which not only fails to be reached, but which is not even really striven after.[4] For the implicit exchangeability of ἠρεμία and the One (or, for that matter, the numbers: see below) compare

Arist. *Met.* 989 b 32 τὰ γὰρ μαθηματικὰ τῶν ὄντων ἄνευ κινήσεώς ἐστιν ἔξω τῶν περὶ τὴν ἀστρολογίαν

1004 b 27-9 ἔτι τῶν ἐναντίων ἡ ἑτέρα συστοιχία στέρησις, καὶ πάντα ἀνάγεται εἰς τὸ ὂν καὶ τὸ μὴ ὄν, καὶ εἰς ἓν καὶ πλῆθος, οἷον στάσις τοῦ ἑνὸς κίνησις δὲ τοῦ πλήθους· ...

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[1] See also K-G I.641; 648 f.

[2] USENER (1890); so SKEMP (1969) 220-1.

[3] Note that in the present passage 'the more remote in place' and the 'remote in thought' coincide: ἐκεῖνο could also be rendered as "that curious conception": cp. the use of κἀκείνοις "the adherents of this curious theory" in 7 a 10: see note *ad loc.*—In 9 b 13 and 11 a 14 ἐκεῖνο points forward.

[4] The two conceptions are conflated in 7 b 23 – 8 a 2 ἄτοπον δὲ καὶ τὸ ἕτερον λεχθέν, ὡς οὐ μιμοῦνται τὰ ὀρεγόμενα τοῦ ἠρεμοῦντος—where τὸ ... λεχθὲν presumably refers to the present passage: see note *ad loc.*

As in the case of the Aristotelian doctrine of a desire for an unmoved object, those who assume that things imitate a motionless One, likewise accept a highest principle which is functionally redundant. The criticism of *a tendency towards, or desire for* ἠρεμία entails making the same point against those who assume ἠρεμία in conjunction with cosmic *imitation* (**ἅμα τῇ μιμήσει**), an assumption which is ascribed alike to the adherents of the One and to those of the numbers. It is to be noted that in the present discussion the theory of μίμησις is in contrast to the Aristotelian doctrine of cosmic ἔφεσις/ὄρεξις,[1] whereas elsewhere these notions are associated with it, μίμησις featuring in the context of cosmic ὄρεξις, 7 b 23 ff. (see above), ὄρεξις/ ἔφεσις in that of cosmic μίμησις, 11 a 27 f.: Πλάτων δὲ καὶ οἱ Πυθαγόρειοι μακρὰν τὴν ἀπόστασιν, ἐπεὶ μιμεῖσθαι δ' *ἐθέλειν* ἅπαντα. All this seems to indicate that, although he takes as his point of departure here the Aristotelian doctrine, to Th. himself cosmic ὄρεξις and cosmic μίμησις are cognate notions—which, incidentally, may be precisely why the discussion of ὄρεξις here provokes his comments on the notion of μίμησις.

Two groups of philosophers alike (**ὁμοίως**) are criticized for combining the (unattainable) goal of ἠρεμία with the theory of cosmic μίμησις, 'adherents of the one' and 'adherents of the numbers' respectively. For the use of **λέγειν** with accusative "to say something", hence "to consider as a principle", "be an adherent of" cp. e.g. Arist. *Met.* 997 b 1-2 οἱ λέγοντες τά τε εἴδη καὶ τὰ μεταξύ, *Phys.* 193 b 36 οἱ τὰς ἰδέας λέγοντες. The use of the indefinite ὅσοι τε ... καὶ ὅσοι ... λέγουσιν (instead of e.g. *οἵ τε ... καὶ οἱ ... λέγοντες) creates the impression that amongst the philosophers referred to the procedure criticized is universal; at the same time it conveys a certain vagueness as to the identity of these groups, the distinction being irrelevant anyway: see ὁμοίως, explained by καὶ γὰρ ... τὸ ἕν (below).

The reference is probably to Plato and 'the Pythagoreans', mentioned in the same breath also 11 a 27, and possibly to Plato and the Pythagoreans respectively. This distinction apparently is motivated by the consideration that in Platonic (in the more strict sense) philosophy the One is more prominent, whereas in 'Pythagorean' thought the emphasis was rather on the numbers—although in some of the testimonies the two positions seem to converge: see below. The question of the identity of ὅσοι τοὺς ἀριθμοὺς λέγουσιν does not concern us here; it suffices to note that, in all likelihood, this is the same group of philosophers as that referred to by οἱ Πυθαγόρειοι in 11 a 27.

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[1] Aristotle, however, does introduce the concept of μίμησις with reference to the simple bodies imitating κυκλοφορία: *GC* 337 a 1-7, quoted *ad* 5 b 25-6, p. 235 n. 2; see also *ad* 8 a 2.

In the case of Plato, the theory of things imitating the One (or the Good) may have been part of his so-called unwritten doctrines;[1] it can at any rate be distilled from secondary sources only. According to Aristotle, Plato adopted Pythagorean μίμησις with no more than a change of name:

> Arist. *Met.* 987 b 7-14 οὗτος (sc. ὁ Πλάτων) οὖν τὰ μὲν τοιαῦτα τῶν ὄντων ἰδέας προσηγόρευσε, τὰ δ' αἰσθητὰ παρὰ ταῦτα καὶ κατὰ ταῦτα λέγεσθαι πάντα· κατὰ μέθεξιν γὰρ εἶναι τὰ [πολλὰ τῶν συνωνύμων] ὁμώνυμα τοῖς εἴδεσιν. τὴν δὲ μέθεξιν τοὔνομα μόνον μετέβαλεν· οἱ μὲν γὰρ Πυθαγόρειοι μιμήσει τὰ ὄντα φασὶν εἶναι τῶν ἀριθμῶν, Πλάτων δὲ μεθέξει, τοὔνομα μεταβαλών· τὴν μέντοι γε μέθεξιν ἢ τὴν μίμησιν ἥτις ἂν εἴη τῶν εἰδῶν ἀφ-εῖσαν ἐν κοινῷ ζητεῖν.

—although the concept of μίμησις is ascribed to Plato in

> test. 52 Gaiser (Cyrillus *Adv. libr. ath. Iul.* I.31.A-B) Πορφύριος δὲ φησὶν ἐν βιβλίῳ τετάρτῳ φιλοσόφου ἱστορίας δοξάσαι τε τὸν Πλάτωνα καὶ μὴν καὶ φράσαι πάλιν περὶ ἑνὸς θεοῦ, ὄνομα δὲ αὐτῷ μηδὲν ἐφαρμόττειν μηδὲ γνῶσιν ἀνθρωπίνην αὐτὸν καταλαβεῖν, τὰς δὲ λεγομένας προσηγορίας ἀπὸ τῶν ὑστέρων καταχρηστικῶς αὐτοῦ κατηγορεῖν. εἰ δὲ ὅλως ἐκ τῶν παρ' ἡμῖν ὀνομάτων χρή τι τολμῆσαι λέγειν περὶ αὐτοῦ, μᾶλλον τὴν *τοῦ ἑνὸς* προσηγορίαν καὶ τὴν *τἀγαθοῦ* τακτέον ἐπ' αὐτοῦ. τὸ μὲν γὰρ ἐμφαίνει τὴν περὶ αὐτὸν ἁπλότητα καὶ διὰ τοῦτο αὐτάρκειαν· χρῄζει γὰρ οὐδενός, οὐ μερῶν, οὐκ οὐσίας, οὐ δυνάμεων, οὐκ ἐνεργειῶν, ἀλλ' ἔστι πάντων τούτων αἴτιος. τἀγαθὸν δὲ παρίστησιν ὅτι ἀπ' αὐτοῦ πᾶν ὅτι περ ἀγαθόν ἐστιν, *ἀπομιμουμένων* κατὰ τὸ δυνατὸν τῶν ἄλλων τὴν ἐκείνου, ⟨εἰ οὕτω⟩ χρὴ φάναι, ἰδιότητα καὶ δι' αὐτῆς σῳζομένων.
>
> (Cp. also, conversely, μέθεξις—or, μετοχή—being ascribed to the Pythagoreans in the passage from Sextus p. 188 below.)

In fact, if a 'demythologized' interpretation of Plato's account of the creation in the *Timaeus* is warranted, the act of shaping things after the likeness of a παράδειγμα may be adduced to illustrate the idea of things (being imperfect imitations of, and so by implication) 'imitating' the Ideas.[2]

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[1] Cherniss (1957) 250 refers to the use of εἴδωλον in Plato *Ep.* VII: "If this passage is authentic, Plato within five or six years of his death solemnly asserted that particulars are "images" of the ideas; and, if it is not authentic, it still proves that during the generation after Plato's death this could be presented as his own statement of his genuine and ultimate doctrine."

Cherniss (250 f.) also refers to Xenocr. fr. 30 Heinze (= 94 IP) (definition of idea as αἰτία παραδειγματική), and Speusippus fr. 4,16 p. 54 Lang (= 28 Tarán), where Speusippus calls the decad, his substitute for the ideas, παράδειγμα παντελέστατον τῷ τοῦ παντὸς ποιητῇ θεῷ προεκκειμένην.

[2] Since the eternity of the cosmos is pictured in the creation myth as an 'eternal life', the concept of ἠρεμία is naturally absent there.

Plato *Tim.* 38 B 6 – C 1 χρόνος δ' οὖν μετ' οὐρανοῦ γέγονεν, ἵνα ἅμα γεννηθέντες ἅμα καὶ λυθῶσιν, ἄν ποτε λύσις τις αὐτῶν γίγνηται, καὶ κατὰ τὸ παράδειγμα τῆς διαιωνίας φύσεως, ἵν' ὡς ὁμοιότατος αὐτῷ κατὰ δύναμιν ᾖ· ... (cp. 38 A 7 χρόνου ταῦτα αἰῶνα μιμουμένου).

39 D 7 – E 2 κατὰ ταῦτα δὴ καὶ τούτων ἕνεκα ἐγεννήθη τῶν ἄστρων ὅσα δι' οὐρανοῦ πορευόμενα ἔσχεν τροπάς, ἵνα τόδε ὡς ὁμοιότατον ᾖ τῷ τελέῳ καὶ νοητῷ ζῴῳ πρὸς τὴν τῆς διαιωνίας μίμησιν φύσεως.

48 E 5 – 49 A 1 ἓν μὲν ὡς παραδείγματος εἶδος ὑποτεθέν, νοητὸν καὶ ἀεὶ κατὰ ταὐτὰ ὄν, μίμημα δὲ παραδείγματος δεύτερον, γένεσιν ἔχον καὶ ὁρατόν.

50 C 2-5 ἐκμαγεῖον γὰρ φύσει παντὶ κεῖται, κινούμενόν τε καὶ διασχηματιζόμενον ὑπὸ τῶν εἰσιόντων, φαίνεται δὲ δι' ἐκεῖνα ἄλλοτε ἀλλοῖον —τὰ δὲ εἰσιόντα καὶ ἐξιόντα τῶν ὄντων ἀεὶ μιμήματα, ...

Cp. also

Plato *Symp.* 207 D 1-2 ἡ θνητὴ φύσις ζητεῖ κατὰ τὸ δυνατὸν ἀεί τε εἶναι καὶ ἀθάνατος ..., 208 A 7 – B 2 τούτῳ γὰρ τῷ τρόπῳ πᾶν τὸ θνητὸν σῴζεται, οὐ τῷ παντάπασιν τὸ αὐτὸ ἀεὶ εἶναι ὥσπερ τὸ θεῖον, ἀλλὰ τῷ τὸ ἀπιὸν καὶ παλαιούμενον ἕτερον νέον ἐγκαταλείπειν οἷον αὐτὸ ἦν.[1]

Phaedo 75 A 11 ff. ἀλλὰ μὲν δὴ ἔκ γε τῶν αἰσθήσεων δεῖ ἐννοῆσαι ὅτι πάντα τὰ ἐν ταῖς αἰσθήσεσιν ἐκείνου τε ὀρέγεται τοῦ ὃ ἔστιν ἴσον, καὶ αὐτοῦ ἐνδεέστερά ἐστιν· ...[2]

For the doctrine ascribed to 'the Pythagoreans' that things are in imitation of numbers cp. 11 a 27 – b 1. Cp. Arist. *Met.* 987 b 7 ff. quoted above,[3] and

Iambl. *In Nicom. arithm.* 10.20 f. (Hippasus Fr. 11 Cardini) οἱ δὲ περὶ Ἵππασον ἀκουσματικοὶ ἀριθμὸν εἶπον παράδειγμα πρῶτον κοσμοποιίας καὶ πάλιν κριτικὸν κοσμουργοῦ θεοῦ ὄργανον (cp. Syr. *In Met.* 123.7 ff.).

Comm. Math. 97.2-8 ἐνόμιζον (sc. οἱ Πυθαγόρειοι) δὲ καὶ κάλλιστα παραδείγματα εἶναι τὰ ἐν τοῖς μαθήμασι τῶν τῇδε, διότι πρὸς νόησιν ἐστάθμηται ταῦτα μόνιμά τε ὄντα καὶ ἀκίνητα καὶ κατὰ τὰ αὐτὰ ἀεὶ ὡσαύτως ἔχοντα, πρὸς ἅπερ ἀποβλέπων τις καὶ μιμούμενος ἀπεργάζοιτο ἂν ἕκαστα τά τε σταθηρὰ καὶ βέβαια ἔργα.

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[1] "but by substitution, the old worn-out mortality leaving another new and similar existence behind" tr. Jowett.

[2] Cp. Guthrie VI. 255 n.1.

[3] Cp. Kahn (1974) 173-4: "Notice the fundamental Eleatic distinction here [in Philol. B 4] between eternal Reality and the generated world-order. It is in this respect that a Pythagorean like Philolaus provides the natural link between Parmenides and Plato. Plato may first have encountered Eleatic dualism in this Pythagorean form, where mathematics studies the principles of eternal Being insofar as they are manifest in the world-order." "[The] elemental principles of number, the Limiting and the Unlimited, are required both for the cognition and for the existence of the world as we know it. It seems to be just such a fusion of epistemological and ontological considerations that Aristotle has in mind when he reports that 'the Pythagoreans say that beings exist by imitation (*mimèsis*) of numbers'" (174).

It is to be noted that the present passage agrees with Aristotle's report that according to the Pythagoreans τὰ ὄντα are μιμήσει ... τῶν ἀριθμῶν (*Met.* 987 b 11, above), both reports conflicting with Aristotle's ascription to the Pythagoreans of the doctrine that things *are* numbers: ὁ μὲν (sc. ὁ Πλάτων) τοὺς ἀριθμοὺς παρὰ τὰ αἰσθητά, οἱ δ' (sc. οἱ Πυθαγόρειοι) ἀριθμοὺς εἶναί φασιν αὐτὰ τὰ πράγματα (*Met.* 987 b 27-8). See Ross *ad loc.*: "It is probable ... that the sixth-century Pythagoreans treated things as 'imitating' number, i.e. as exhibiting numerical relations, while those of the fifth century treated number as the very stuff of which things are made." (I.163), and TAYLOR (1928) 132: "We are clearly dealing with an attempt to retain a formula which was only adequate so long as 'numbers' themselves were thought of as volumes, *res extensae*, made by persons who have really so far outgrown the formula as to be able to think of the 'number of a collection' as something different from the collection itself".

The clause introduced by **γάρ** explains the assertion that the criticism just made applies to the adherents of the numbers too, i.e. no less than to those of the One (ὁμοίως 5 a 26). The phrase is, again, elliptical: καὶ γὰρ αὐτοὶ ⟨οἱ⟩ τοὺς ἀριθμοὺς (sc. λέγοντες) φασιν (sc. εἶναι) τὸ ἕν.

For the use of **αὐτοί** cp. αὐτῶν τῶν ἐμψύχων 11 a 17; see also *ad* 4 b 4. If it is assumed that ⟨οἱ⟩ was omitted through haplography,[1] λέγοντες is easily supplied from ὅσοι τοὺς ἀριθμοὺς λέγουσιν; alternatively, τοὺς ἀριθμούς might be explained as a marginal gloss (short for ὅσοι τοὺς ἀριθμοὺς λέγουσιν). For **φασιν** (sc. εἶναι) cp. Arist. *Met.* 1078 b 11-2 οἱ πρῶτοι τὰς ἰδέας φήσαντες εἶναι.

The Pythagoreans themselves too, by being adherents of the numbers, postulate the One—i.e. as the principle of number. The γάρ-clause explains the assertion that for the present purpose the distinction between the two groups is irrelevant: both the adherents of the One and those of numbers state that the object of μίμησις is some one, motionless principle (whether they explicitly assume that things imitate the One, or merely imply it by supposing that things imitate numbers, which presuppose the One). Compare

S.E. *Adv. Math.* X 260-1 (test. 32, 499 Gaiser) οἵ τε ἀριθμοὶ πάντες καὶ αὐτοὶ ὑπὸ τὸ ἓν πεπτώκασιν (καὶ γὰρ ἡ δυὰς μία τις ἐστὶ δυάς, καὶ ἡ τριὰς ἕν τι ἐστί, τριάς, καὶ ἡ δεκὰς ἓν ἀριθμοῦ κεφάλαιον), ἔνθεν κινηθεὶς ὁ Πυθαγόρας ἀρχὴν ἔφησεν εἶναι τῶν ὄντων τὴν μονάδα, ἧς κατὰ μετοχὴν ἕκαστον τῶν ὄντων ἓν λέγεται·

Simpl. *In Phys.* 455.2-8 (test. 23 B, 484 Gaiser) ἐπεὶ οὖν πρῶτος ἀριθμῶν ἡ δυάς, ταύτης δὲ ἀρχαὶ τὸ ἓν καὶ τὸ μέγα καὶ μικρόν, καὶ παντὸς ἀριθμοῦ ταύτας ἀρχὰς εἶναι ἀνάγκη. οἱ δὲ ἀριθμοὶ στοιχεῖα τῶν ὄντων πάντων. ὥστε καὶ πάντων ἀρχαὶ τὸ ἓν καὶ τὸ μέγα καὶ μικρὸν ἤτοι ἡ ἀόριστος δυάς. καὶ

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[1] I owe this suggestion to Dr J.M. van Ophuijsen.

γὰρ ἕκαστος τῶν ἀριθμῶν καθόσον μὲν ὅδε τίς ἐστι καὶ εἷς καὶ ὡρισμένος, τοῦ ἑνὸς μετέχει, καθόσον δὲ διαιρεῖται καὶ πλῆθός ἐστι, τῆς ἀορίστου δυάδος.

It has been suggested that the sentence should be syntactically completed by supplementing an infinitive to go with φασιν (either <μιμεῖσθαι> (R-F: "For the latter themselves speak of the numbers as imitating the One."); TRICOT; also L-M (tr.) or <διώκειν> ((Verbeke *apud*) SKEMP (1969) 218)). This, however, appears to be rather unlikely in so far as (1) Th. is here dealing with imitation of the principle or principles by physical entities, especially the heavenly bodies, and in this context the numbers accordingly are considered in their role of principles.[1] Moreover (2), as we have argued *ad* ὅσοι ... λέγουσιν above, "αὐτοί" can only refer to Pythagoreans of some denomination, and these cannot be credited with this doctrine.

This at once disposes of SKEMP's reference to an alleged parallel in *EE* I.8, where Aristotle is criticizing Plato for assuming that the numbers aim at the one:

Arist. *EE* 1218 a 24-8 παράβολος δὲ καὶ ἡ ἀπόδειξις ὅτι τὸ ἓν αὐτὸ τὸ ἀγαθόν, ὅτι οἱ ἀριθμοὶ ἐφίενται ⟨αὐτοῦ⟩· οὔτε γὰρ ὡς ἐφίενται λέγεται φανερῶς, ἀλλὰ λίαν ἁπλῶς τοῦτό φασί, καὶ ὄρεξιν εἶναι πῶς ἄν τις ὑπολάβοι ἐν οἷς ζωὴ μὴ ὑπάρχει; (See also *ad* II.3, below).

Cp. L-M, who in their commentary also refer to this passage: "La remarque, cependant, s'appliquerait ici à des platoniciens (...) plutôt qu' à Platon." (*ad loc.*).

Furthermore, I fail to see that "καὶ γάρ naturally expresses the point that [those who combined μίμησις and ὄρεξις] extend an earlier μίμησις doctrine by this attribution of ἔφεσις to numbers": SKEMP (1969) 218 (with n. 3). Both the presence and the position of αὐτοί to my mind shut out the possibility that καί be construed either with τοὺς ἀριθμούς or, for that matter, with an assumedly implied ⟨διώκειν⟩.

II.3 (5 a 28 – b 10): *The alleged desire for the best presupposes that the heavenly bodies are animate, which means that they have psychic movement (since desire involves sense perception, which takes place in soul); and because a desire* for the best *is involved, they should in fact have dianoetic movement. The rotation imparted by the alleged first cause, then, would be inferior to the movement they already have.*

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[1] Note, however, that in the case of a hypothetical reading *καὶ γὰρ *αὐτοὺς* τοὺς ἀριθμούς either μιμεῖσθαι or διώκειν *might* be supplemented; this would mean ascribing to the Pythagoreans the doctrine that not only the natural entities, but also "the numbers themselves" pursue the one; of course, this reading would obviously be a *lectio facilior*.

5 a 28 – b 2 εἰ δ' ἡ ἔφεσις ... τὰ κινουμένα.

A third main point concerning the ἔφεσις ascribed to the heavenly bodies (ἡ ἔφεσις) concerns the supposed primacy of circular movement. If the heavenly bodies are endowed with the tendency assumed, it is more than likely that they are endowed with soul—especially since it is supposed to be a tendency towards the best. For **ἄλλως τε καί**, cp.

CP II.15.2 δενδρωθεῖσα μὲν γὰρ ἰσχυρά (sc. ἡ ἀμυγδαλῆ, the almond), φυομένη δὲ ἀσθενής, ἄλλως τε καὶ ἀπὸ σπέρματος.
Od. 41 καὶ γὰρ ἡ ἀναπνοὴ φθείρει (sc. τὴν ὀσμήν) καὶ τὸ ἔξωθεν ἐπεισιὸν καὶ ἀλλότριον· ἐπεὶ καὶ τὰ πνεύματα φθείρει καὶ καταναλίσκει ... τὰς ὀσμάς, ἄλλως τε καὶ τὰς μὴ φυσικάς.

The force of this third point lies in the argument that, both nutrition (shared by animals and plants) and perception—and consequently desire—(characteristic of animals) implying the involvement of soul (**μετὰ ψυχῆς**; more precisely: desire originates in soul: ἀφ' ἧς 5 b 4), this is *a fortiori* true of a tendency *towards the best*, because, involving as it does the necessity of a rational choice, it makes an appeal to the supreme faculty of soul (τὸ διανοητικόν; cp. τῆς διανοίας 5 b 9-10):

Arist. *DA* 414 a 31 ff. δυνάμεις δ' (sc. τῆς ψυχῆς) εἴπομεν θρεπτικόν, ὀρεκτικόν, αἰσθητικόν, κινητικὸν κατὰ τόπον, διανοητικόν. *ὑπάρχει δὲ τοῖς μὲν φυτοῖς τὸ θρεπτικὸν μόνον, ἑτέροις δὲ τοῦτό τε καὶ τὸ αἰσθητικόν. εἰ δὲ τὸ αἰσθητικόν, καὶ τὸ ὀρεκτικόν·* ὄρεξις μὲν γὰρ ἐπιθυμία καὶ θυμὸς καὶ βούλησις, τὰ δὲ ζῷα πάντ' ἔχουσι μίαν γε τῶν αἰσθησέων, τὴν ἁφήν· ᾧ δ' αἴσθησις ὑπάρχει, τούτῳ ἡδονή τε καὶ λύπη καὶ τὸ ἡδύ τε καὶ λυπηρόν, οἷς δὲ ταῦτα, καὶ ἡ ἐπιθυμία· τοῦ γὰρ ἡδέος ὄρεξις αὕτη. ... (414 b 16 ff.) περὶ δὲ φαντασίας ἄδηλον, ὕστερον δ' ἐπισκεπτέον. ἐνίοις δὲ πρὸς τούτοις ὑπάρχει καὶ τὸ κατὰ τόπον κινητικόν, ἑτέροις δὲ καὶ τὸ διανοητικόν τε καὶ νοῦς, οἷον ἀνθρώποις καὶ εἴ τι τοιοῦτον ἕτερόν ἐστιν ἢ τιμιώτερον. —for the addition καὶ εἴ τι κ.τ.λ. cp. *EN* 1141 a 34 – b 2 καὶ γὰρ ἀνθρώπου ἄλλα πολὺ θειότερα τὴν φύσιν, οἷον φανερώτατά γε ἐξ ὧν ὁ κόσμος συνέστηκεν. (sc. = τὰ θειότατα τῶν φανερῶν, the heavenly bodies: *Phys.* 196 a 34, *Met.* 1026 a 18).

It should be noted that, here again, Th. starts from the more neutral term (**ἔφεσις** instead of ὄρεξις: see *ad* 5 a 15)—the noun in itself not carrying connotations that presuppose the point to be made here, i.e. the involvement of soul.

The conclusion that the heavenly bodies (**τὰ κινούμενα**, the bodies moving <by virtue of this tendency> or, for that matter, the bodies moved <by

the unmoved principle>)[1] would seem to be endowed with soul (**ἔμψυχ' ἂν εἴη**), is in agreement with the Aristotelian point of view:[2]

Arist. *Cael.* 292 a 18 ff. ἀλλ' ἡμεῖς ὡς περὶ σωμάτων αὐτῶν (sc. τῶν ἄστρων) μόνον καὶ μονάδων τάξιν μὲν ἐχόντων, ἀψύχων δὲ πάμπαν, διανοούμεθα· δεῖ δ' ὡς μετεχόντων ὑπολαμβάνειν πράξεως καὶ ζωῆς·[3] οὕτω γὰρ οὐθὲν δόξει παράλογον εἶναι τὸ συμβαῖνον. ... (292 b 1-2) διὸ δεῖ νομίζειν καὶ τὴν τῶν ἄστρων πρᾶξιν εἶναι τοιαύτην οἵα περ ἡ τῶν ζῴων καὶ φυτῶν.

MA 700 b 12-3 τῶν γὰρ ἄλλων παρὰ τὴν τοῦ ὅλου κίνησιν τὰ ἔμψυχα αἴτια τῆς κινήσεως, ὅσα μὴ κινεῖται ὑπ' ἀλλήλων διὰ τὸ προσκόπτειν ἀλλήλοις.[4]

(—with the result, incidentally, that Aristotle's criticism of Plato for holding that the (obviously inanimate) numbers feel a desire for the one (*EE* 1218 a 24-8, quoted p. 189 above, is internally consistent).

The potential optative (**ἂν εἴη**) indicates that the author does not take responsibility for this conclusion, which actually seems to follow as a consequence of the assumptions themselves: cp. οὐ τῆς ἀρίστης ἂν εἴη 5 b 8. Later on in this treatise Th. seems to favour the idea that the movement of the cosmos as a whole is to be conceived of as some kind of life;[5] this idea, to say the least, can do without a soul being ascribed to the individual heavenly bodies. Here, however, the point is not so much that Th. wants to dis-

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[1] Active in R-F, REALE/CATAN, passive in TRICOT, REALE, L-M. In any case, τὰ κυκλικά obviously are being referred to, which constitute the subject-matter of these paragraphs: *contra* WEISCHE, who erroneously takes it that in the present passage "die Aussage, *alle Dinge* seien ἔμψυχα, wenn die aristotelische ἔφεσις-Lehre zu Recht bestünde, als absurde Konsequenz erwähnt wird" (1961) 68 n. 26 (italics added). (WEISCHE, to my mind, is also mistaken in assuming that Th. is presenting this consequence as an absurd one: see below.)

[2] Although in *Cael.* 291 a 20 Aristotle, in his effort to refute the Pythagorean theory of the harmony of spheres, seems to subscribe to the opposite point of view: see GUTHRIE VI.256 *ad loc.*

[3] "but we should rather conceive them as enjoying life and action" *RevOT.*

[4] "The use of ἔμψυχα here, rather than ζῷα, indicates that Aristotle is here thinking as well of the heavenly spheres", NUSSBAUM (1978) 332 *ad loc.*
τὴν τοῦ ὅλου κίνησιν apparently refers to ὁ πρῶτος οὐρανός, and the idea seems to be that the first heaven is inspired by the unmoved mover (who is νοῦς itself and thus not an ἔμψυχον?) in particular. Aristotle's restriction (παρά) is understandable in view of the statement which follows, that the movements of animate things have a limit (διὸ καὶ πέρας ἔχουσιν αὐτῶν πᾶσαι αἱ κινήσεις· καὶ γὰρ καὶ αἱ τῶν ἐμψύχων. 700 b 13-4). If τὰ ἔμψυχα does in fact include the heavenly bodies with their eternal rotation, the idea presumably is that in that case the movement *never actually reaches* its πέρας, owing to the eternal attraction on the part of the principle of τὸ ὀρεκτόν.

[5] See esp. 10 a 15-6, and 159.29-30 FHS&G (= Proclus *In Tim.* 35 A) ἔμψυχον γὰρ καὶ αὐτὸς (sc. ὁ Θεόφραστος) εἶναι δίδωσι τὸν οὐρανὸν καὶ διὰ τοῦτο θεῖον, quoted *ad loc.*

sociate himself from the idea that heavenly bodies have a soul, but rather that the concept of an ὄρεξις on the part of the heavenly bodies in itself refutes the idea that the first cause is cause of *the best* movement, since ὄρεξις in itself implies a movement that is superior to the rotation allegedly induced by the first cause: see 5 b 7-10.

Th. adds the proviso that a supporter of this theory (Aristotle, for instance) would not be speaking "by similarity and metaphor" (**καθ' ὁμοιότητα καὶ μεταφοράν**, the latter being the more specific term: cp. Arist. *Top.* 140 a 10-1 οἱ μεταφέροντες κατά τινα ὁμοιότητα μεταφέρουσιν). The *way of speaking* καθ' ὁμοιότητα is distinct from (though, presumably, parallel to) the *mode of reasoning* καθ' ὁμοιότητα—or, καθ' ὁμοίωσιν, as Th. (4 b 13) puts it. If used metaphorically, the term 'desire' (this obviously being the object implied, despite Th.' use—for reasons connected with the present argument—of the more neutral ἔφεσις: see above) would *not* necessarily involve soul;[1] in that case the criticism brought forward here would not apply.

Th. seems to have in mind a metaphor κατὰ τὸ ἀνάλογον in particular, involving a proportion[2] like the type of reasoning κατ' ἀναλογίαν referred to in 4 b 12-3; see Aristotle's distinction of four types of μεταφορά in *Poet.* 1457 b 6 ff. μεταφορὰ δ' ἐστὶν ὀνόματος ἀλλοτρίου ἐπιφορὰ ἢ ἀπὸ τοῦ γένους ἐπὶ εἶδος, ἢ ἀπὸ τοῦ εἴδους ἐπὶ τὸ γένος ἢ ἀπὸ τοῦ εἴδους ἐπὶ εἶδος ἢ κατὰ τὸ ἀνάλογον.[3] The particular metaphor κατὰ τὸ ἀνάλογον Th. apparently is referring to seems to belong, in Aristotle's terminology, to those designating things as "set before our eyes" (πρὸ ὀμμάτων Arist. *Rhet.* 1411 b 23), in so far as they involve 'activity' (ἐνέργεια): Aristotle gives as an example Homer's frequent τὰ ἄψυχα ἔμψυχα ποιεῖν διὰ τῆς μεταφορᾶς (*ibid.* 1411 b 32-3); cp. also

> Arist. *DA* 420 b 5-9 ἡ δὲ φωνὴ ψόφος τίς ἐστιν ἐμψύχου· τῶν γὰρ ἀψύχων οὐθὲν φωνεῖ, ἀλλὰ καθ' ὁμοιότητα λέγεται φωνεῖν, οἷον αὐλὸς καὶ λύρα καὶ ὅσα ἄλλα τῶν ἀψύχων ἀπότασιν ἔχει καὶ μέλος καὶ διάλεκτον· ἔοικε γὰρ ὅτι καὶ ἡ φωνὴ ταῦτ' ἔχει.

In the present passage the idea seems to be that one actually could speak of a 'desire' on the part of the heavenly bodies *without* incurring the criticism which is to follow, if one would ascribe this characteristic to the heavenly

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[1] For the idea that the use of metaphor is due to a lack of appropriate linguistic distinctions, see [Ps.-]Arist. *Meteor.* IV, 380 b 30.

[2] I.e. a proportion involving four different terms: for a characterization of all four types of metaphor assumed by Aristotle in terms of some 'proportion' see LEVIN (1982).

[3] See LUCAS *ad loc.* Taking into account 9 a 7-9, it could be argued that the 'analogous' metaphor "spans the widest gap", too, since it adopts a term appropriately said of something belonging to a different genus (that is to say, involving a transference from the realm of ἔμψυχα to that of ἄψυχα).

bodies merely as an analogy of the desire of the animate entities (i.e., without implying the actual involvement of soul).[1]

It should be noted that the proviso made by Th. (which conceivably might affect the validity of the subsequent criticism) is unlikely to be welcomed by those who assume a desire on the part of the heavenly bodies anyway, since on a metaphorical interpretation of the term "desire" the causation on the part of the unmoved mover would still be left entirely unaccounted for.

Contra L-M "Le fait qu[e Th.] tende ici à récuser l'usage de la métaphore suggère que l'emploi en est à ses yeux illégitime dans le cas des sphères: si on leur prête le désir, il faut aussi leur reconnaître une âme" (*ad loc.*); as argued above, Th. is rather pointing out a possible way of eluding the inconsistency which the theory of a desire on the part of the heavenly bodies is subject to.

5 b 3-7 ψυχὴ δ' ... γίνονται.

ψυχή is the reading of the majority of the manuscripts (ψυχήν C, which at the same time reads κίνησιν). With ψυχὴ ... καὶ κίνησις as grammatical subject the singular δοκεῖ involves a problem (hence, of course, the reading of C which yields an impersonal use of δοκεῖ). The grammatical irregularity may, however, be accounted for by the fact that δοκεῖ precedes καὶ κίνησις, the phrase as a whole by its wording thus being an effort to express the coexistence of soul and movement as neutrally as possible (see below). It seems better, in any case, to accept this irregularity rather than to adopt, with R-F and L-M, USENER's conjecture ψυχῇ,[2] since both ζωὴ γὰρ τοῖς ἔχουσιν ("sc. ψυχήν" USENER (1861) 266) and ἀφ' ἧς in 5 b 3-4 involve a reference to ψυχή (whereas with ψυχῇ in the dative case κίνησις would be the obvious antecedent).

For the use of **ἅμα** cp.

CP II.7 2 ἅμα δ' ὑγρότητος πλῆθος[3] καὶ ὁ πρόσειλος τόπος οἰκεῖος, πέψις γὰρ οὕτω μᾶλλον,[4] ἀεὶ δὲ κατὰ τὸ ὑπεραῖρον ἡ ὄρεξις.
HP V.4.2 τῶν δὲ ἄλλων (sc. ξύλων) ἀσαπέστατον μετὰ τὰ κυπαρίττινα καὶ τὰ θυώδη τὴν συκάμινον εἶναί φασι, καὶ ἰσχυρὸν ἅμα καὶ εὔεργον τὸ ξύλον· ...
400A.1-2 FHS&G καὶ ἡ τῶν ἐγγεοτόκων τούτων γένεσις ἅμα καὶ φύσις, ...

The rather neutral claim (which, moreover, is expressed with some circumspection (**δοκεῖ**)) that soul and movement are coexisting phenomena, will

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[1] Cp. the ἀνάλογον of the heart ascribed to plants in Arist., *GA* 735 a 23 ff.: see next note.
[2] USENER (1861) 266; (1890).
[3] πλῆθος U; πλήθει Schneider (after Gaza): see EINARSON/LINK.
[4] "But abundance of fluid and the appropriateness of a sunny station go together" tr. EINARSON/LINK.

presently be replaced by the more explicit formula ἡ τῆς ψυχῆς (sc. κίνησις), 5 b 8-9. That δοκεῖ does not merely refer to an ἔνδοξον to which Th. does not commit himself may be inferred from the reasoning in the sequel (γάρ, ἀφ' ἧς καί, ἐπεὶ καί). The concept of psychic movement, which is introduced here as something new (δ'), will prove to be essential to the argument: if the heavenly bodies have ὄρεξις, and thus are endowed with soul, *they already partake in a kind of κίνησις* (which, by its very nature, is superior to their κυκλοφορία), and, as a consequence, the first cause cannot possibly be cause of *the best* movement after all: see 5 b 7-10.

The rather circumspect manner of introducing this concept here may have to do with the fact that Aristotle, at any rate in certain stages of his career,[1] took pains to argue (against Plato, amongst others: see *DA* I.3) that soul—though both *having* a principle of movement (ἡ ψυχὴ κινήσεως ἔχει ἀρχήν *Met.* 1046 b 17), and *being productive* of movement (*DA* 415 b 21-2 ἀλλὰ μὴν καὶ ὅθεν πρῶτον ἡ κατὰ τόπον κίνησις, ψυχή)[2]—is not in movement itself:

> Arist. *DA* 405 b 31 – 406 a 2 ἐπισκεπτέον δὲ πρῶτον μὲν περὶ κινήσεως· ἴσως γὰρ οὐ μόνον ψεῦδός ἐστι τὸ τὴν οὐσίαν αὐτῆς τοιαύτην εἶναι οἵαν φασὶν οἱ λέγοντες ψυχὴν εἶναι τὸ κινοῦν ἑαυτὸ ἢ δυνάμενον κινεῖν, ἀλλ' *ἕν τι τῶν ἀδυνάτων τὸ ὑπάρχειν αὐτῇ κίνησιν.* (See also 404 a 21 ff.)
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> 408 b 13-8 βέλτιον γὰρ ἴσως μὴ λέγειν ψυχὴν ἐλεεῖν ἢ μανθάνειν ἢ διανοεῖσθαι, ἀλλὰ τὸν ἄνθρωπον τῇ ψυχῇ.[3] τοῦτο δὲ *μὴ ὡς ἐν ἐκείνῃ τῆς κινήσεως οὔσης,* ἀλλ' ὁτὲ μὲν μέχρι ἐκείνης, ὁτὲ δ' ἀπ' ἐκείνης, οἷον ἡ μὲν αἴσθησις ἀπὸ τωνδί, ἡ δ' ἀνάμνησις ἀπ' ἐκείνης ἐπὶ τὰς ἐν τοῖς αἰσθητηρίοις κινήσεις ἢ μονάς.
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> 411 a 24-6 φανερὸν οὖν ἐκ τῶν εἰρημένων ὡς οὔτε τὸ γινώσκειν ὑπάρχει τῇ ψυχῇ διὰ τὸ ἐκ στοιχείων εἶναι, *οὔτε τὸ κινεῖσθαι αὐτὴν καλῶς οὐδ' ἀληθῶς λέγεται.*

Contrast e.g.

> Plato *Soph.* 249 A 9 – B 1 ἀλλὰ δῆτα νοῦν μὲν καὶ ζωὴν καὶ ψυχὴν ⟨ἔχειν⟩ (sc. λέγομεν τὸ παντελῶς ὄν), ἀκίνητον μέντοι τὸ παράπαν ἔμψυχον ὂν ἑστάναι; [ ] πάντα ἔμοιγε ἄλογα ταῦτ' εἶναι φαίνεται.

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[1] See e.g. Heinaman (1989), who refers to *Top.* (123 a 17), where ψυχή and τὸ κινεῖσθαι appear as an example of species and differentia, whereas in 111 b 5 ff. he had explicitly stated that if any εἶδος of κίνησις applies, δῆλον ὅτι κινεῖται (sc. ἡ ψυχή). It may be relevant here that the ascription of κίνησις to soul is not likewise objectionable to Aristotle in contexts where the term is to the utmost degree void of physical connotations (i.e. when 'dianoetic' movement is concerned): see *ad* ὥσπερ ... γίνονται below.

[2] Also 411 a 29-30 (ἐπεὶ) γίνεται ... ἡ κατὰ τόπον κίνησις τοῖς ζῴοις ὑπὸ τῆς ψυχῆς, ...

[3] "In spite of the preference which A. avows for the more correct expression he goes on using the less correct form of ordinary language throughout the treatise and talks like other

A reason why the idea of soul being in *loco*motion itself was objectionable to Aristotle apparently was that this would entail the possibility of resurrection:

Arist. *DA* 406 a 30 – b 5 ἔτι δ' ἐπεὶ φαίνεται κινοῦσα τὸ σῶμα, ταύτας εὔλογον κινεῖν τὰς κινήσεις ἃς καὶ αὐτὴ κινεῖται. εἰ δὲ τοῦτο, καὶ ἀντιστρέψασιν εἰπεῖν ἀληθὲς ὅτι ἣν τὸ σῶμα κινεῖται, ταύτην καὶ αὐτή. τὸ δὲ σῶμα κινεῖται φορᾷ· ὥστε καὶ ἡ ψυχὴ μεταβάλλοι ἂν κατὰ τὸ σῶμα ἢ ὅλη ἢ κατὰ μόρια μεθισταμένη. εἰ δὲ τοῦτ' ἐνδέχεται, καὶ ἐξελοῦσαν εἰσιέναι πάλιν ἐνδέχοιτ' ἄν· τούτῳ δ' ἕποιτ' ἂν τὸ ἀνίστασθαι τὰ τεθνεῶτα τῶν ζῴων.

Aristotle's objections against any kind of κίνησις of soul[1] are of course connected with his general tenet that actuality (or, form) is ontologically prior to potentiality (or, matter), and with his conviction that soul cannot be entirely material—which may ultimately have been motivated by Aristotle's wish to dissociate the ultimate principle (and thus νοῦς) from notions like extension and change, by virtue of which it would be subject to corruption and to being affected in general:[2] see *ad* αἱ αἰσθήσεις 5 b 5 and ἐν ψυχῇ 5 b 6-7. Whatever the motivation for his objections against psychic movement may have been, Aristotle clearly did attach much importance to distinguishing soul as being 'act' (or, form) itself from κίνησις which is "from being potential, to become actual".

Arist. *DA* 412 a 19-28 ἀναγκαῖον ἄρα τὴν ψυχὴν οὐσίαν εἶναι ὡς εἶδος σώματος φυσικοῦ δυνάμει ζωὴν ἔχοντος. ἡ δ' οὐσία ἐντελέχεια. τοιούτου ἄρα σώματος ἐντελέχεια. αὕτη δὲ διχῶς, ἡ μὲν ὡς ἐπιστήμη, ἡ δ' ὡς τὸ θεωρεῖν. *φανερὸν οὖν ὅτι ὡς ἐπιστήμη·* ἐν γὰρ τῷ ὑπάρχειν τὴν ψυχὴν καὶ ὕπνος καὶ ἐγρήγορσίς ἐστιν, ἀνάλογον δ' ἡ μὲν ἐγρήγορσις τῷ θεωρεῖν, ὁ δ' ὕπνος τῷ ἔχειν καὶ μὴ ἐνεργεῖν. προτέρα δὲ τῇ γενέσει ἐπὶ τοῦ αὐτοῦ ἡ ἐπιστήμη. *διὸ ψυχή ἐστιν ἐντελέχεια ἡ πρώτη σώματος φυσικοῦ δυνάμει ζωὴν ἔχοντος.* (also *ibid.* 414 a 13; 28-9; *Met.* 1043 a 35).

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people ... of the soul as the subject of emotions, sensations and processes of thought, just as if he had never laid down this canon." HICKS *ad loc.*

[1] Somewhat paradoxically, Aristotle's objections against ascribing κίνησις to soul (as well as against the expression that something could be "in soul") are occasionally ignored when the highest form of psychic movement, (dia)noetic—and thus obviously immaterial—movement is concerned: see p. 194 n. 1 above, and p. 215-6 below.

[2] Accordingly, in the case of human beings, too, incapacity of the intellect in old age should be thought of as an affection not of the soul but of its vehicle: Arist. *DA* 408 b 24 ff. καὶ τὸ νοεῖν δὴ καὶ τὸ θεωρεῖν μαραίνεται ἄλλου τινὸς ἔσω φθειρομένου, αὐτὸ δὲ *ἀπαθές ἐστιν.* τὸ δὲ διανοεῖσθαι καὶ φιλεῖν ἢ μισεῖν οὐκ ἔστιν ἐκείνου πάθη, ἀλλὰ τουδὶ τοῦ ἔχοντος ἐκεῖνο, ᾗ ἐκεῖνο ἔχει ("Thinking, loving, and hating are affections not of thought, but of that which has thought, so far as it has it", *RevOT*). διὸ καὶ τούτου φθειρομένου οὔτε μνημονεύει οὔτε φιλεῖ· οὐ γὰρ ἐκείνου ἦν, ἀλλὰ τοῦ κοινοῦ, ὃ ἀπόλωλεν· *ὁ δὲ νοῦς ἴσως θειότερόν τι καὶ ἀπαθές ἐστιν.* ὅτι μὲν οὖν οὐχ οἷόν τε κινεῖσθαι τὴν ψυχήν, φανερὸν ἐκ τούτων· εἰ δ' ὅλως μὴ κινεῖται, δῆλον ὡς οὐδ' ὑφ' ἑαυτῆς.

The kind of soul involved in the case of the heavenly bodies, however, would, in view of their being eternally attracted by the universal principle of τὸ ὀρεκτόν, rather seem to involve 'second actuality' (i.e., ὡς τὸ θεωρεῖν). Cp. preceding note.
See also *ad* ζωή, below.

The κίνησις of which Th. asserts that it is coexistent with soul,[1] then, is meant to replace the Aristotelian actuality (both 'first' and 'second')—the point being that, if an entitity has desire, whether it be an animal (having a desire which derives from soul in the sense of a first actuality), or a heavenly body (endowed with a soul which, being never inactive, is in a state of second actuality: see below), 'psychic' *κίνησις* is involved. The comprehensiveness of the statement is emphasized by αἱ ὀρέξεις *πρὸς ἕκαστον*, 5 b 4-5; see also *ad* τοῖς ἔχουσιν, below.

The parenthesis ζωὴ γὰρ τοῖς ἔχουσιν is an adjunct of ψυχή: see above. It explains (**γάρ**) the coexistence of soul and κίνησις by drawing attention to **ζωή** as the 'dynamic' aspect of soul; cp. Plato *Leg.* 10, 895 C 11-3 τί δέ; ὁπόταν ψυχὴν ἔν τισιν ὁρῶμεν, μῶν ἄλλο ἢ ταὐτὸν τούτῳ; ζῆν ὁμολογητέον; [ ] οὐκ ἄλλο.; Arist. *DA* 411 a 16 τὸ μὴ λέγειν ζῷα ψυχῆς ἐνούσης ἄτοπον; *ibid.* 413 a 21 ... διωρίσθαι τὸ ἔμψυχον τοῦ ἀψύχου τῷ ζῆν.

For **τοῖς ἔχουσιν** (sc. ψυχήν) cp. Arist. *GA* 735 a 23-6 quoted *ad* τοῖς λέγουσιν 5 a 13, p. 163 above; also

> Arist. *Resp.* 479 a 8 (478 b 29 ff. ἔστι δὲ θάνατος καὶ ἡ φθορὰ πᾶσιν ὁμοίως τοῖς μὴ ἀτελέσιν ... ἀτελῆ δὲ λέγω οἷον τά τε ᾠὰ καὶ τὰ σπέρματα τῶν φυτῶν, ὅσα ἄρριζα. πᾶσι μὲν οὖν ἡ φθορὰ γίνεται διὰ θερμοῦ τινος ἔκλειψιν, τοῖς δὲ τελείοις, ἐν ᾧ τῆς οὐσίας ἡ ἀρχή. ...) ἡ δ' ἀρχὴ τῆς ζωῆς ἐκλείπει *τοῖς ἔχουσιν*, ὅταν μὴ καταψύχηται τὸ θερμὸν τὸ κοινωνοῦν αὐτῆς.
> See also Arist. *Sens.* 436 b 18 ff. αἱ δὲ διὰ τῶν ἔξωθεν αἰσθήσεις ... πᾶσι μὲν τοῖς ἔχουσι σωτηρίας ἕνεκεν ὑπάρχουσιν, and *PA* 656 a 37 ἡ δ' ὄψις πᾶσι τοῖς ἔχουσιν εὐλόγως ἐστὶ περὶ τὸν ἐγκέφαλον, p. 213 below.

In the present context, which does not involve any opposition to entities *without* a soul, the addition of τοῖς ἔχουσιν rather serves to stress that the statement applies without exception (cp. πρὸς ἕκαστον below): as soon as it

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[1] That the notion of psychic κίνησις was not likewise objectionable to Th. seems to be corroborated by 716.130-1 FSH&G: μία δὲ φύσις τῆς μουσικῆς· κίνησις τῆς ψυχῆς ἡ κατὰ ἀπόλυσιν γιγνομένη τῶν διὰ τὰ πάθη κακῶν—which could, of course, be '(dia)noetic', but see 7-8: ἔστι γὰρ τὸ γινόμενον κίνημα μελῳδητικὸν περὶ τὴν ψυχὴν σφόδρα ἀκριβές, ὁπόταν φωνῇ ἐθελήσῃ ἑρμηνεύειν αὐτό ("For the movement productive of melody, when it occurs in the soul, is very accurate, when it (the soul) wishes to express it (the movement) with the voice." tr. FHS&G.).

is assumed that an entity has soul, it is not possible not to ascribe life to it, and thus also (psychic) movement.

The parenthesis seems to derive its cogency from the appeal to a conception of κίνησις which excludes γένεσις and φθορά: see Arist. *Phys.* 225 a 35 f. αἱ κατὰ γένεσιν καὶ φθορὰν (sc. μεταβολαὶ) οὐ κινήσεις, *ad* ὡς ἀκινήτοις καὶ ἀμεταβλήτοις 4 a 7-8, p. 83 above. On the other hand, as far as Aristotle is concerned, this addition would be of little or no avail, because Aristotle prefers to describe ζωή, too, in terms of ἐνέργεια rather than of κίνησις[1] (Arist. *DA* 415 b 13 τὸ ... ζῆν τοῖς ζῶσι τὸ εἶναί ἐστιν). In the sense of a first actuality, being alive is opposed to 'living potentially' which applies to seeds and fetations:[2]

> Arist. *GA* 736 a 32 ff. οὔτε γὰρ ὡς ἄψυχον ἂν θείη τις τὸ κύημα κατὰ πάντα τρόπον ἐστερημένον ζωῆς· οὐδὲν γὰρ ἧττον τά τε σπέρματα καὶ τὰ κυήματα τῶν ζῴων ζῇ τῶν φυτῶν, καὶ γόνιμα μέχρι τινός ἐστιν. (...) 736 b 8 ff. τὴν μὲν οὖν θρεπτικὴν ψυχὴν τὰ σπέρματα καὶ τὰ κυήματα τὰ μήπω χώριστα δῆλον ὅτι δυνάμει μὲν ἔχοντα θετέον, ἐνεργείᾳ δ' οὐκ ἔχοντα, πρὶν ἢ καθάπερ τὰ χωριζόμενα τῶν κυημάτων ἕλκει τὴν τροφὴν καὶ ποιεῖ τὸ τῆς τοιαύτης ψυχῆς ἔργον· πρῶτον μὲν γὰρ ἅπαντ' ἔοικε ζῆν τὰ τοιαῦτα φυτοῦ βίον. ἑπομένως δὲ δῆλον ὅτι καὶ περὶ τῆς αἰσθητικῆς λεκτέον ψυχῆς καὶ περὶ τῆς νοητικῆς· πάσας γὰρ ἀναγκαῖον δυνάμει πρότερον ἔχειν ἢ ἐνεργείᾳ.
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> See also the distinction between τὸ ζῆν κατὰ δύναμιν and τὸ ζῆν κατ' ἐνέργειαν in *Protr.* B 79 ff. D., where the latter features as life in the proper sense of the word; here it is implied that τὸ ζῆν, in the sense of second actuality at least, *involves* a particular kind of κίνησις: τὸν μὲν γὰρ ἐγρηγορότα φατέον ζῆν ἀληθῶς καὶ κυρίως, τὸν δὲ καθεύδοντα *διὰ τὸ δύνασθαι μεταβάλλειν εἰς ταύτην τὴν κίνησιν*, καθ' ἣν λέγομεν ἐγρηγορέναι τε καὶ τῶν πραγμάτων αἰσθάνεσθαί τινος (B 80).[3]

The tendency to dissociate life from κίνησις may, again, have been motivated particularly by the wish to guarantee the permanence of the higher forms of life.[4] As a matter of fact, the condition of second actuality which is ascribed to the (unmoved) prime mover, is also conceived of as life: see

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[1] Note that, where the eternity of the movement of the universe as a whole is concerned, Aristotle does admit of the reverse picture of κίνησις as some kind of life: see Arist. *Phys.* 250 b 11 ff. quoted *ad* 5 a 2-4, p. 143 above.

[2] Th. makes the same distinction in *CP* V.18.1 πάντα (sc. τὰ σπέρματα) γὰρ ζῇ μέχρι τινός, εἶτ' ἀπόλλυται (ζῆν δὲ λέγω δυνάμει).

[3] On these passages, see De Strycker (1968).

[4] For the characterization of kinds of life in terms of value, see e.g. Arist. *GA* 736 b 31 ff. ὡς δὲ διαφέρουσι τιμιότητι αἱ ψυχαὶ καὶ ἀτιμίᾳ ἀλλήλων οὕτω καὶ ἡ τοιαύτη διαφέρει φύσις; also *Sens.* 436 b 18 ff., quoted below. See S. Mansion (1973), who endeavours to provide a coherent interpretation of apparently divergent conceptions of life in Aristotle's

> Arist. *Met.* 1072 b 13 ff. ἐκ τοιαύτης ἄρα ἀρχῆς ἤρτηται ὁ οὐρανὸς καὶ ἡ φύσις. διαγωγὴ δ' ἐστὶν οἵα ἡ ἀρίστη μικρὸν χρόνον ἡμῖν. οὕτω γὰρ ἀεὶ ἐκεῖνο (ἡμῖν μὲν γὰρ ἀδύνατον), ἐπεὶ καὶ ἡδονὴ ἡ ἐνέργεια τούτου. ... (26 ff.) καὶ ζωὴ δέ γε ὑπάρχει· *ἡ γὰρ νοῦ ἐνέργεια ζωή, ἐκεῖνος δὲ ἡ ἐνέργεια·* ἐνέργεια δὲ ἡ καθ' αὑτὴν ἐκείνου ζωὴ ἀρίστη καὶ ἀΐδιος. φαμὲν δὴ τὸν θεὸν εἶναι ζῷον ἀΐδιον ἄριστον, ὥστε ζωὴ καὶ αἰὼν συνεχὴς καὶ ἀΐδιος ὑπάρχει θεῷ· τοῦτο γὰρ ὁ θεός.

Cp., in an ethical context *EN* 1175 a 12-6 ἡ δὲ ζωὴ ἐνέργειά τίς ἐστί ... ἡ δ' ἡδονὴ τελειοῖ τὰς ἐνεργείας, καὶ τὸ ζῆν δή, οὗ ὀρέγονται.
It seems that according to the Aristotelian theory the heavenly bodies should, in view of their eternal nature and the continuity of their rotation, also have life in the sense of a second actuality.

Aristotle's minimum definition of ζωή is found in *DA* 412 a 15-6: τῶν δὲ φυσικῶν τὰ μὲν ἔχει ζωήν, τὰ δ' οὐκ ἔχει· ζωὴν δὲ λέγομεν τὴν δι' αὑτοῦ τροφήν τε καὶ αὔξησιν καὶ φθίσιν; see also 415 a 23 ff. ἡ γὰρ θρεπτικὴ ψυχὴ καὶ τοῖς ἄλλοις ὑπάρχει, καὶ πρώτη καὶ κοινοτάτη δύναμίς ἐστι ψυχῆς, καθ' ἣν ὑπάρχει τὸ ζῆν ἅπασιν; *Resp.* 474 b 10 τὰς μὲν οὖν ἄλλας δυνάμεις τῆς ψυχῆς ἀδύνατον ὑπάρχειν ἄνευ τῆς θρεπτικῆς, and 416 b 21 τὸ μὲν τρέφον ἐστὶν ἡ πρώτη ψυχή (cp. *Resp.* 474 b 1).[1]
A nutritive faculty is prerequisite for having a faculty of perception (*DA* 415 a 1-2 ἄνευ μὲν γὰρ τοῦ θρεπτικοῦ τὸ αἰσθητικὸν οὐκ ἔστιν 414 b 4, quoted *ad* ὥσπερ καὶ τοῖς ζῴοις above); also

> Arist. *DA* 413 b 4-9 αἰσθήσεως δὲ πρῶτον ὑπάρχει πᾶσιν ἁφή. ὥσπερ δὲ τὸ θρεπτικὸν δύναται χωρίζεσθαι τῆς ἁφῆς καὶ πάσης αἰσθήσεως, οὕτως ἡ ἁφὴ τῶν ἄλλων αἰσθήσεων. θρεπτικὸν δὲ λέγομεν τὸ τοιοῦτον μόριον τῆς ψυχῆς οὗ καὶ τὰ φυτὰ μετέχει· τὰ δὲ ζῷα ἅπαντα φαίνεται τὴν ἁπτικὴν αἴσθησιν ἔχοντα· ...

The model of a linear hierarchy, in which the lower faculties may occur without the higher ones, but the higher faculties do imply the lower ones, is made explicit in *DA* 414 b 29-32: ἀεὶ ... ἐν τῷ ἐφεξῆς ὑπάρχει δυνάμει τὸ πρότερον, ... οἷον ἐν τετραγώνῳ μὲν τρίγωνον, ἐν αἰσθητικῷ δὲ τὸ θρεπτι-

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works (in *Protr.* and *DA* in particular). For forerunners of the Aristotelian conception of a *scala naturae* see SOLMSEN (1955).

In *Resp.* 477 a 16 ff. Aristotle suggests that this hierarchy is connected with degrees of θερμότης (cp. *DA* 416 b 30 πᾶν ἔμψυχον ἔχει θερμότητα): (...ὅτι) τὰ τιμιώτερα τῶν ζῴων πλείονος τετύχηκε θερμότητος· ἅμα γὰρ ἀνάγκη καὶ ψυχῆς τετυχηκέναι τιμιωτέρας· ...

[1] Here again the role of τὸ θερμόν appears to be 'vital' (see preceding note): Arist. *Resp.* 479 a 29 γένεσις μὲν οὖν ἐστιν ἡ πρώτη μέθεξις ἐν τῷ θερμῷ τῆς θρεπτικῆς ψυχῆς, ζωὴ δ' ἡ μονὴ ταύτης, *Juv.* 469 b 18-20 ἀνάγκη τοίνυν ἅμα τό τε ζῆν ὑπάρχειν καὶ τὴν τοῦ θερμοῦ τούτου σωτηρίαν, καὶ τὸν καλούμενον θάνατον εἶναι τὴν τούτου φθοράν; *ibid.* 470 a 19-20 ἐπεὶ δὲ πᾶν ζῶν ἔχει ψυχήν, αὕτη δ' οὐκ ἄνευ φυσικῆς ὑπάρχει θερμότητος, ... See also *CP* II.6.2 (...) εἴπερ ἀφαιρεῖται τὴν τοῦ θερμοῦ δύναμιν, ἀφαιρεῖται γὰρ τὴν ζωήν.

κόν; this model involves a difficulty where the heavenly bodies are concerned—as Aristotle himself appears to have realized: 413 a 31 – b 1 χωρίζεσθαι δὲ τοῦτο μὲν τῶν ἄλλων δυνατόν, τὰ δ' ἄλλα τούτου ἀδύνατον *ἐν τοῖς θνητοῖς* ("This power of self-nutrition can be separated from the other powers mentioned, but not they from it—in mortal beings at least." *RevOT*). φανερὸν δ' ἐπὶ τῶν φυομένων· οὐδεμία γὰρ αὐτοῖς ὑπάρχει δύναμις ἄλλη ψυχῆς.

If in the case of the heavenly bodies life is a condition of 'second actuality', a state of always being awake, it would follow that they do not have a perceptive faculty: see

> Arist. *Somn.* 454 a 19-29 ὁμοίως δὲ καὶ ὅτι οὐδέν ἐστιν ὃ ἀεὶ ἐγρήγορεν ἢ ἀεὶ καθεύδει, ἀλλὰ τοῖς αὐτοῖς ὑπάρχει τῶν ζῴων ἀμφότερα τὰ πάθη ταῦτα· *οὐδὲ γὰρ εἴ τί ἐστι ζῷον ἔχον αἴσθησιν, τοῦτ' ἐνδέχεται οὔτε καθεύδειν οὔτ' ἐγρηγορέναι· ἄμφω γάρ ἐστι τὰ πάθη ταῦτα περὶ αἴσθησιν τοῦ πρώτου αἰσθητικοῦ. οὐκ ἐνδέχεται δὲ οὐδὲ θάτερον τούτων ἀεὶ ὑπάρχειν τῷ αὐτῷ, οἷον ἀεί τι γένος ζῴων καθεύδειν ἢ ἀεί τι ἐγρηγορέναι,* ἔτι ὅσων ἐστί τι ἔργον κατὰ φύσιν, ὅταν ὑπερβάλλῃ τὸν χρόνον ᾧ δύναται χρόνῳ τι ποιεῖν, ἀνάγκη ἀδυνατεῖν, οἷον τὰ ὄμματα ὁρῶντα καὶ παύεσθαι τοῦτο ποιοῦντα, ὁμοίως δὲ καὶ χεῖρα καὶ ἄλλο πᾶν οὗ ἐστί τι ἔργον.

As we will see, Aristotle nevertheless apparently did (in some contexts at any rate) ascribe to the heavenly bodies—which are ἔμψυχα and thus alive (ζῶντα) but not ζῷα—a perceptional faculty. In the present passage of Th. ἐπεὶ καὶ αἱ αἰσθήσεις κ.τ.λ. seems to imply that αἴσθησις is ascribed to τὰ ζῷα *as opposed to* the heavenly bodies: see below.

Like ζωή in the preceding parenthesis, ἀφ' ἧς refers to ψυχή. One may perhaps compare *Char.* XVII.3 καὶ ὑπὸ τῆς ἑταίρας καταφιλούμενος εἰπεῖν (sc. ὁ μεμψίμοιρος) "θαυμάζω εἰ σὺ καὶ ἀπὸ τῆς ψυχῆς οὕτω με φιλεῖς". For ἀπό + genitive indicating the origin of natural phenomena see ἀφ' ἧς ἡ κυκλικὴ 5 a 3, and note *ad loc.*; see also ἡ τῆς διανοίας, ἀφ' ἧς καὶ ἡ ὄρεξις below. If in 5 b 3 the nominative ψυχή is read (see above), the objection made by R-F ("ψυχῇ is too remote to be easily treated as the antecedent of ἧς" (*ad loc.*)) does not apply any more.

By singling out ὄρεξις among other phenomena that could have been mentioned, **καί**[1] emphasizes desire as a phenomenon originating in soul; the

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[1] This use of καί, which seems to be related to that in διὸ (δὴ) καί (see e.g. 4 a 6, and Introduction p. 4, n. 5), may be explained as indicating a significant addition: "also—and this is relevant here—", i.e., "nota bene". Cp., without a relative, *CP* V.5.1 ὑπὲρ ὧν φανερωτέρας ἄν τις ὑπολάβοι τὰς αἰτίας εἶναι, καθάπερ καί εἰσιν ("One would suppose that the causes here are more evident, as indeed they are" tr. EINARSON/LINK).

coexistence of desire and soul had merely been stated as a hypothesis (or as a premiss, at any rate) in *εἰ δ'* ἡ ἔφεσις ... μετὰ ψυχῆς 5 a 28 – b 1.

Desire originates in soul irrespective of the object involved, that is, without exception. **πρὸς ἕκαστον** emphasizes the fact that, if there is a desire, the involvement of soul cannot be denied; to put it differently, πρὸς ἕκαστον goes beyond the specific case at issue here of a desire *for the best* (which derives from διάνοια in particular: see 5 b 9-10).[1] This generalizing statement calls forth the subsequent assertion about the (more controversial) situation in the case of animals.

In **ὥσπερ ... γίνονται** Th. adds, *en passant* as it were, that in the case of animals too, ὄρεξις implies the actual (i.e., 'physical': see ἐν ψυχῇ below) involvement of soul; psychic κίνησις is not restricted to the 'dianoetic' variety.

(ὥσπερ) **καί** implies that the heavenly bodies, though being ζῶντα, are not ζῷα. **τοῖς ζῴοις** obviously is meant also to include man—if only for the reason that, when human beings are actually opposed to other animals, the latter usually are referred to as θήρια instead: see e.g. Arist. *DA* 414 b 33 ὥστε κατ' ἕκαστον ζητητέον, τίς ἑκάστου ψυχή, οἷον τίς φυτοῦ καὶ τίς ἀνθρώπου ἢ θηρίου; cp. the expressions ἄλογα ζῷα *Piet.* 1.2, cp. 584A.199 FHS&G; τὰ λοιπὰ τῶν ζῴων *ibid.* 204, cp. 271.[2] The example of human beings, however, is not prominent here, since the point is that even in cases where the sensitive faculty of soul is unaccompanied by a noetic faculty, as in the case of the other animals, desire takes place in soul: see below.

Contra USENER, who proposes to read πρὸς ἕκαστον ἀνθρώποις τε καὶ ζῴοις—be it for purely stylistical reasons: "Schon durch die dreimal nacheinander wiederholte relative Anknüpfung mit beigefügtem καί wird der Satz unerträglich schleppend" (1861) 267.

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[1] Note that in this respect too Simplicius' report (271 FHS&G) seems to be at variance with conceptions of Th. which can be distilled from the present treatise (αἱ μὲν γὰρ ὀρέξεις καὶ ἐπιθυμίαι καὶ ὀργαὶ σωματικαὶ κινήσεις εἰσὶ καὶ ἀπὸ τούτου τὴν ἀρχὴν ἔχουσιν, quoted *ad* 5 b 9-10, p. 220 below).

[2] In 531.12-21 FSH&G Th. stresses the fundamental kinship of man and the other animals where ὄρεξις and αἴσθησις are concerned: οὕτω δὲ καὶ τοὺς πάντας ἀνθρώπους ἀλλήλοις τίθεμεν [καὶ] συγγενεῖς καὶ μὴν ⟨καὶ⟩ πᾶσι τοῖς ζῴοις· αἱ γὰρ τῶν σωμάτων ἀρχαὶ πεφύκασιν αἱ αὐταί· λέγω δὲ οὐκ ἐπὶ τὰ στοιχεῖα ἀναφέρων τὰ πρῶτα· ἐκ τούτων μὲν γὰρ καὶ τὰ φυτά· ἀλλ' οἷον δέρμα, σάρκας καὶ τὸ τῶν ὑγρῶν τοῖς ζῴοις σύμφυτον γένος· πολὺ δὲ μᾶλλον τῷ *τὰς ἐν αὐτοῖς* (sc. the animals, including man) *ψυχὰς ἀδιαφόρους πεφυκέναι, λέγω δὴ ταῖς ἐπιθυμίαις καὶ ταῖς ὀργαῖς, ἔτι δὲ τοῖς λογισμοῖς, καὶ μάλιστα πάντων ταῖς αἰσθήσεσιν.* ἀλλ' ὥσπερ τὰ σώματα, οὕτω καὶ τὰς ψυχὰς τὰ μὲν ἀπηκριβωμένας ἔχει τῶν ζῴων, τὰ δὲ ἧττον τοιαύτας, πᾶσί γε μὴν αὐτοῖς αἱ αὐταὶ πεφύκασιν ἀρχαί. δηλοῖ δὲ ἡ τῶν παθῶν οἰκειότης.

ἐπεὶ καὶ αἱ αἰσθήσεις ... γίνονται explains that desire invariably originates in soul—in the case of animals too, even if the involvement of αἴσθησις might suggest that in their case ὄρεξις rather has a physical origin.[1] The tenet seems to be that there is nothing unfamiliar, and certainly nothing disputable, about the concept of psychic κίνησις: it is a common phenomenon, in no way less substantial than locomotion —in fact it is a fully comparable and, indeed, a *superior* kind of movement.

According to this interpretation,[2] then, Th. implies that the heavenly bodies, as contrasted with τὰ ζῷα, do not have αἴσθησις. This in itself is in accordance with the Aristotelian definition of a ζῷον, in which αἴσθησις constitutes a specific difference:

> Arist. *Sens.* 436 b 10-2 τοῖς δὲ ζῴοις, ᾗ μὲν ζῷον ἕκαστον, ἀνάγκη ὑπάρχειν αἴσθησιν· τούτῳ γὰρ τὸ ζῷον εἶναι καὶ μὴ ζῷον διορίζομεν (also *PA* 666 a 35, *Juv.* 467 b 25).
>
> *GA* 731 b 4 διαφέρει δ' αἰσθήσει τὰ ζῷα τῶν ζώντων μόνον (*ibid.* 741 a 9-10 διαφέρει τὸ ζῷον τοῦ φυτοῦ αἰσθήσει).

It is obvious, however, that in these passages Aristotle has in mind animals as opposed to plants, which occupy a lower place in the scale of nature; in the case of Aristotle the heavenly bodies are not likely to be subsumed under τὰ ζῶντα μόνον anyway. Whether Aristotle did at any time ascribe αἴσθησις to the heavenly bodies, too, is a vexed question.

According to Aristotle, αἴσθησις (which is conceived as a kind of ἀλλοίωσις: see *ad* ἐν ψυχῇ below) is instrumental to the survival of animals.

This is particularly true for the sense of touch—which is shared by all ζῷα.[3] Touch is the sense by means of which an animal perceives food (ἡ γὰρ ἁφὴ τῆς τροφῆς αἴσθησις *DA* 414 b 7) and which enables it to survive by avoiding some things and seizing others:

> Arist. *DA* 434 b 11-24 ἐπεὶ γὰρ τὸ ζῷον σῶμα ἔμψυχόν ἐστι, σῶμα δὲ ἅπαν ἁπτόν, ἁπτὸν δὲ τὸ αἰσθητὸν ἁφῇ, *ἀνάγκη καὶ τὸ τοῦ ζῴου σῶμα ἁπτικὸν εἶναι, εἰ μέλλει σώζεσθαι τὸ ζῷον.* αἱ γὰρ ἄλλαι αἰσθήσεις δι' ἑτέρων αἰσθάνονται, οἷον ὄσφρησις ὄψις ἀκοή· ἁπτόμενον δέ, εἰ μὴ ἕξει αἴσθησιν, οὐ δυνήσεται *τὰ μὲν φεύγειν τὰ δὲ λαβεῖν.* εἰ δὲ τοῦτο, ἀδύνατον ἔσται σώζεσθαι τὸ ζῷον.

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[1] That is a point which seems to be denied (or at least not recognized) by Simplicius in 271 FHS&G, quoted p. 220 below.

Professor Richard Sorabji has kindly pointed out to me the relevance of Arist. *DA* 431 a 13-4, where the desiderative faculty is said to be not different (οὐχ ἕτερον) from the perceptive faculty, though different in being (τὸ εἶναι ἄλλο).

[2] For a different interpretation of this sentence, see p. 205 below.

[3] τὰ δὲ ζῷα πάντ' ἔχουσι μίαν γε τῶν αἰσθήσεων, τὴν ἁφήν, Arist. *DA* 414 b 3; ἄνευ μὲν γὰρ ἁφῆς οὐδεμίαν ἐνδέχεται ἄλλην αἴσθησιν ἔχειν 435 a 12-3 (see also 435 b 3-4).

διὸ καὶ ἡ γεῦσίς ἐστιν ὥσπερ ἁφή τις· τροφῆς γάρ ἐστιν, ἡ δὲ τροφὴ τὸ σῶμα τὸ ἁπτόν. ψόφος δὲ καὶ χρῶμα καὶ ὀσμὴ οὐ τρέφει, οὐδὲ ποιεῖ οὔτ' αὔξησιν οὔτε φθίσιν. ὥστε καὶ τὴν γεῦσιν ἀνάγκη ἁφὴν εἶναί τινα, διὰ τὸ τοῦ ἁπτοῦ καὶ θρεπτικοῦ αἴσθησιν εἶναι. αὗται μὲν οὖν ἀναγκαῖαι τῷ ζῴῳ, καὶ φανερὸν ὅτι οὐχ οἷόν τε ἄνευ ἁφῆς εἶναι ζῷον, ...

In the case of the sense faculties, again, some sort of linear hierarchy applies: animals which are immobile have the sense of touch only; animals which are capable of locomotion are also provided with senses operating in a less direct manner, which enable them to get the food they need:

Arist. *DA* 434 a 27 – b 2 αἴσθησιν δ' οὐκ ἀναγκαῖον ἐν ἅπασι τοῖς ζῶσιν· ... τὸ δὲ ζῷον ἀναγκαῖον αἴσθησιν ἔχειν, εἰ μηθὲν μάτην ποιεῖ ἡ φύσις. ἕνεκά του γὰρ πάντα ὑπάρχει τὰ φύσει, ἢ συμπτώματα ἔσται τῶν ἕνεκά του. εἰ οὖν πᾶν σῶμα πορευτικὸν μὴ ἔχον αἴσθησιν, φθείροιτο ἂν καὶ εἰς τέλος οὐκ ἂν ἔλθοι, ὅ ἐστι φύσεως ἔργον· πῶς γὰρ θρέψεται;

In the sequel Aristotle suggests that these other, more complex senses are for the sake of well-being rather than for the sake of mere survival;[1] however, this distinction does not seem to be a very clear-cut one to begin with:

DA 434 b 24-7 αἱ δὲ ἄλλαι (sc. αἰσθήσεις) τοῦ τε εὖ ἕνεκα καὶ γένει ζῴων ἤδη οὐ τῷ τυχόντι, ἀλλὰ τισίν, οἷον τῷ πορευτικῷ ἀνάγκη ὑπάρχειν· *εἰ γὰρ μέλλει σῴζεσθαι*, οὐ μόνον δεῖ ἁπτόμενον αἰσθάνεσθαι ἀλλὰ καὶ ἄποθεν.; cp. also *Sens.* 445 a 27 – b 1 ὅτι μὲν οὖν οὐ συμβάλλεται εἰς τροφὴν τὸ ὀσφραντόν, ᾗ ὀσφραντόν, δῆλον· ὅτι μέντοι εἰς ὑγίειαν, καὶ ἐκ τῆς αἰσθήσεως καὶ ἐκ τῶν εἰρημένων φανερόν, ὥστε ὅπερ ὁ χυμὸς ἐν τῷ θρεπτικῷ καὶ πρὸς τὰ τρεφόμενα, τοῦτ' ἐστὶ πρὸς ὑγίειαν τὸ ὀσφραντόν.

Moreover, the sense of taste—which had been identified as a kind of touch and thus, strictly speaking, does not belong to the more complex type of sense involved here—appears among the senses which are (used) for the sake of well-being too:

DA 435 b 19-25 τὰς δ' ἄλλας αἰσθήσεις ἔχει τὸ ζῷον, ὥσπερ εἴρηται, οὐ τοῦ εἶναι ἕνεκα ἀλλὰ τοῦ εὖ, οἷον ὄψιν, ἐπεὶ ἐν ἀέρι καὶ ὕδατι, ὅπως ὁρᾷ, ὅλως δ' ἐπεὶ ἐν διαφανεῖ, γεῦσίν τε διὰ τὸ ἡδὺ καὶ λυπηρόν, ἵνα αἰσθάνηται τὸ ἐν τῇ τροφῇ καὶ ἐπιθυμῇ καὶ κινῆται, ἀκοὴν δὲ ὅπως σημαίνῃ τι αὐτῷ [γλῶτταν δὲ ὅπως σημαίνῃ τι ἑτέρῳ].

Thus there is reason to suspect that the distinction is not meant to differentiate the senses (some of them being for the sake of survival, others for the sake of well-being), but rather aims at differentiating different, more and less dignified, *functions* of the senses: in the case of some kinds of animals a particular sense may be for the sake of survival, in that of others it may be (used) for the sake of well-being (as well). See

[1] Cp. *Philos.* Fr. 24 Ross (quoted below), where sight and hearing are said to be the only senses which contribute to well-being instead of being.

DA 420 b 16-22 ἤδη γὰρ τῷ ἀναπνεομένῳ καταχρῆται ἡ φύσις ἐπὶ δύο ἔργα, καθάπερ τῇ γλώττῃ ἐπί τε τὴν γεῦσιν καὶ διάλεκτον, ὧν ἡ μὲν γεῦσις ἀναγκαῖον (διὸ καὶ πλείοσιν ὑπάρχει), ἡ δ' ἑρμηνεία ἕνεκα τοῦ εὖ, οὕτω καὶ τῷ πνεύματι πρός τε τὴν θερμότητα τὴν ἐντὸς ὡς ἀναγκαῖον (...) καὶ πρὸς τὴν φωνήν, ὅπως ὑπάρχῃ τὸ εὖ.

The distinction, then, apparently does not, after all, regard the senses as such, but primarily aims at differentiating more and less developed kinds of animals.

On further consideration, it appears that the kinds of animals which are capable of using their senses *for the sake of well-being* are distinguished by a specific characteristic, that of being additionally endowed with *intellectual* faculties (*as opposed to* sense faculties):

Arist. *Sens.* 436 b 18 – 437 a 3 αἱ δὲ διὰ τῶν ἔξωθεν αἰσθήσεις τοῖς πορευτικοῖς αὐτῶν, οἷον ὄσφρησις καὶ ἀκοὴ καὶ ὄψις, πᾶσι μὲν τοῖς ἔχουσι σωτηρίας ἕνεκεν ὑπάρχουσιν, ὅπως διώκωσί τε προαισθανόμενα τὴν τροφὴν καὶ τὰ φαῦλα καὶ τὰ φθαρτικὰ φεύγωσι, *τοῖς δὲ καὶ φρονήσεως τυγχάνουσι* (sc. αἱ διὰ τῶν ἔξωθεν αἰσθήσεις ὑπάρχουσιν) *τοῦ εὖ ἕνεκα*· πολλὰς γὰρ εἰσαγγέλουσι διαφοράς, ἐξ ὧν ἥ τε τῶν νοητῶν ἐγγίνεται φρόνησις καὶ ἡ τῶν πρακτῶν.

Man surpasses all other animals by his use of the most simple faculty, touch: τὴν δ' ἁφὴν (sc. ἔχομεν) ἀκριβεστάτην τῶν ἄλλων ζῴων (*Sens.* 441 a 2). He uses it not only for survival, like the other animals, but he may also use it, by virtue of his intellectual faculties, in order to attain well-being; this at the same time is the reason that one can tell from the condition of the skin of a human being his intellectual status:

Arist. *DA* 421 a 18-26 ἀκριβεστέραν ἔχομεν τὴν γεῦσιν διὰ τὸ εἶναι αὐτὴν ἁφήν τινα, ταύτην δ' ἔχειν τὴν αἴσθησιν τὸν ἄνθρωπον ἀκριβεστάτην· ἐν μὲν γὰρ ταῖς ἄλλαις λείπεται πολλῶν τῶν ζῴων, κατὰ δὲ τὴν ἁφὴν πολλῷ τῶν ἄλλων διαφερόντως ἀκριβοῖ. *διὸ καὶ φρονιμώτατόν ἐστι τῶν ζῴων.* σημεῖον δὲ τὸ καὶ ἐν τῷ γένει τῶν ἀνθρώπων παρὰ τὸ αἰσθητήριον τοῦτο εἶναι εὐφυεῖς καὶ ἀφυεῖς, παρ' ἄλλο δὲ μηδέν· *οἱ μὲν γὰρ σκληρόσαρκοι ἀφυεῖς τὴν διάνοιαν, οἱ δὲ μαλακόσαρκοι εὐφυεῖς.*

Now, because the heavenly bodies are eternal, they obviously do not need αἴσθησις for their survival (as they likewise have no use for a nutritive faculty of soul: see above).[1]

As a matter of fact, it may be inferred from Nicolaus Damascenus' *De Plantis* that Aristotle in his own treatise on plants did deny αἴσθησις to the heavenly bodies: see Nic. Damasc. *Plant.* § 21 (DROSSAART LULOFS/POORT-

[1] In Plato *Tim.* 33 C f. it is argued that the world sphere is without sense organs and without 'organs' of nutrition.

[2] The Arabic translation is reconstructed with the aid of the Syriac paraphrase: see DROSSAART LULOFS/POORTMAN *l.c.*

MAN (1989) 132, 258 ff.),[2] where it is argued that the heavenly bodies are not susceptible to being affected (ἀπαθῆ in the Greek translation, 816 a 25), and § 24: sensation marks the distinction between life and death, and the heavens are far removed from these things (*ibid.* 134, 260).

In *DA*, however, Aristotle, possibly in an attempt to preserve the idea of a linear hierarchy of living beings,[1] seems to have rejected the idea that entities which are not generated are without perception (the text, however, is notoriously corrupt: see HICKS *ad loc.*):

> Arist. *DA* 434 b 3-8 οὐχ οἷόν τε δὲ σῶμα ἔχειν μὲν ψυχὴν καὶ νοῦν κριτικόν, αἴσθησιν δὲ μὴ ἔχειν, μὴ μόνιμον ὄν, γεννητὸν δέ· *ἀλλὰ μὴν οὐδὲ ἀγέννητον*·[2] διὰ τί γὰρ οὐχ ἕξει;[3] ἢ γὰρ τῇ ψυχῇ βέλτιον ἢ τῷ σώματι.[4] νῦν δ' οὐδέτερον· ἡ μὲν γὰρ οὐ μᾶλλον νοήσει, τὸ δ' οὐθὲν ἔσται μᾶλλον δι' ἐκεῖνο. οὐθὲν ἄρα ἔχει ψυχὴν σῶμα μὴ μόνιμον ἄνευ αἰσθήσεως. See HICKS *ad loc.*: "reading οὐχ ἕξει, Plutarch can interpret the arguments which follow the question as urged in support of the view that it is better both for the souls and bodies of the stars that they should have sensation. Sensitivity is better than its absence and the perceptions of the heavenly bodies are not, like ours, dependent upon τὸ πάσχειν, so as to infringe upon their impassivity and immortality. Nor will it be a hindrance to their thought, for the particulars of sense lead up to the universal, and sense in them need not disturb reason as in us" (for this explanation HICKS refers to Philoponus, 596.12-32: ἐπὶ γὰρ τῶν ὑπὸ σελήνην ἀληθής ἐστιν ὁ λόγος, ὅτι πάσχοντα αἰσθάνονται, ἐκεῖνα δὲ μηδὲν πάσχοντα αἰσθάνεται. 20-1).

In *On Philosophy*, too, Aristotle seems to have argued that the heavenly bodies *are* endowed with sensation, that is, exclusively with sight and hearing (thereby, incidentally, departing from the idea of a linear hierarchy of sense organs):

> Arist. *Philos.* Fr. 24 Ross καὶ ὁ μὲν Πρόκλος βούλεται τὰ οὐράνια ὄψιν μόνον καὶ ἀκοὴν ἔχειν, καθάπερ καὶ Ἀριστοτέλης· *μόνας γὰρ τῶν αἰσθήσεων ἐκείνας ἔχει τὰς πρὸς τὸ εὖ εἶναι συμβαλλομένας, οὐ μὴν τὰς πρὸς τὸ εἶναι, αἱ δὲ ἄλλαι αἰσθήσεις πρὸς τὸ εἶναι συμβάλλονται.* καὶ ὁ ποιητὴς δὲ μαρτυρεῖ τούτοις λέγων "ἠέλιος, ὃς πάντ' ἐφορᾷς καὶ πάντ' ἐπακούεις",[5] ὡς ἂν

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[1] Although the heavenly bodies infringe upon the idea of a linear hierarchy of living beings anyway, because they lack a nutritive faculty: see above.

[2] This clause is in Alexander as well as in some of the manuscripts known to Simplicius: see HICKS *ad loc.* (who rejects these words and reads διὰ τί γὰρ ἕξει).

[3] οὐχ ἕξει (instead of ἕξει) is the reading of five of the manuscripts and was defended by Plutarch.

[4] "Why should it not have sensation? It would have to be either for the soul or for the body" *RevOT.*

[5] *Il.* 3.277; the hexameter, of course, reads ἠέλιός *θ'* (*Od.* 12.323 ἠελίου, ὃς πάντ' ἐφορᾷ καὶ πάντ' ἐπακούει).

> ὄψιν μόνην καὶ ἀκοὴν αὐτῶν ἐχόντων· *καὶ ὅτι αὗται μάλιστα αἱ αἰσθήσεις ἐν τῷ ἐνεργεῖν μᾶλλον γινώσκουσιν ἤπερ ἐν τῷ πάσχειν καὶ οἰκειότεραι αὗται αὐτοῖς ὡς ἀναλλοιώτοις.*

Thus even in those passages which seem to attest that he did ascribe αἴσθησις to the heavenly bodies, Aristotle took care to dissociate as much as possible the αἴσθησις ascribed to them from the notion of being affected: see below.

Even if αἴσθησις is denied to the heavenly bodies—as Th.' wording seems to imply (see p. 201 with n. 2 above), and as Aristotle actually may have done in *De plantis*—, this does not make it impossible that the heavenly bodies are moving by virtue of an ὄρεξις for the ultimate principle: the desire on the part of this particular type of ζῶντα might originate in the *intellectual* faculty of soul instead: see

> Arist. *MA* 701 a 34-6 τῆς μὲν ἐσχάτης αἰτίας τῆς κινήσεως ὀρέξεως οὔσης, ταύτης δὲ γινομένης ἢ δι' αἰσθήσεως ἢ διὰ φαντασίας καὶ νοήσεως.

See also *ad* ἡ τῆς διανοίας, 5 b 9-10.

Whether Th.' implicit denial of αἴσθησις to the heavenly bodies (which might indeed reflect his own opinion: see *ad* ἔμψυχ' ἂν εἴη 5 b 2, and εἴπερ ἐφέσει τινὶ καὶ ὀρέξει, 6 a 9) was meant to be in accordance with, or rather to be a criticism of the Aristotelian point of view as Th. conceived it, the present passage at any rate suggests that Th. would object to any attempt to dissociate αἴσθησις from τὸ πάσχειν: see ἐν τῷ πάσχειν οὖσαι, below.

Another possible interpretation would be that ἐπεὶ καὶ ... γίνονται explicitly states the premiss which is implied by ἀφ' ἧς καὶ αἱ ὀρέξεις πρὸς ἕκαστον: soul gives rise to desire, since <sense-perception causes desire, and> perceptions also ... <involve, or in this case,> occur in soul. According to this interpretation καί would present αἱ αἰσθήσεις as the missing link between the phenomenon of ὄρεξις and the involvement of soul. This interpretation would imply that Th. is taking for granted (1) that, if the heavenly bodies have a desire (as assumed by the Aristotelian theory), they have αἴσθησις, and (2) that in the case of the heavenly bodies too αἴσθησις involves πάσχειν.[1] (One may compare the related issue raised in 7 b 19 ff., where Th. questions the idea that ποιεῖν and πάσχειν should always be distinguished.)

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[1] Contrast Simplicius' report according to which Th. restricted (ἀλλιοωτική and) παθητικὴ κίνησις to sublunary phenomena (for τὰ περὶ τὸ μέσον: see 5 b 12), 143.4-7 FHS&G (= Simpl. *In Phys.* 1.1 184 a 16 – b 14) ἐπεὶ δὲ οὐκ ἄνευ *μὲν* κινήσεως οὐδὲ περὶ ἑνὸς λεκτέον (πάντα γὰρ ἐν κινήσει τὰ τῆς φύσεως), ἄνευ *δὲ* ἀλλοιωτικῆς καὶ παθητικῆς οὐχ ὑπὲρ τῶν περὶ τὸ μέσον, εἰς ταῦτά τε καὶ περὶ τούτων λέγοντας οὐχ οἷόν τε καταλιπεῖν τὴν αἴσθησιν ...

Even if the other interpretation of ἐπεὶ καὶ κ.τ.λ. suggested here would be correct, Simplicius' testimony would not really be relevant, since in the present passage Th. is merely drawing consequences from the Aristotelian theory of a desire on the part of the heavenly

Sense-perception consists **ἐν τῷ πάσχειν** ... δι' ἑτέρων; for the use of ἐν τῷ + infinitive to indicate what something depends on (or, more strongly, what something amounts to—thus coming close to a definition), compare

Plato *Gorg.* 494 B 1-2 ἀλλ' ἐν τούτῳ ἐστὶν τὸ ἡδέως ζῆν, ἐν τῷ ὡς πλεῖστον ἐπιρρεῖν.
Arist. *Pol.* 1255 b 31-2 ὁ γὰρ δεσπότης οὐκ ἐν τῷ κτᾶσθαι τοὺς δούλους, ἀλλ' ἐν τῷ χρῆσθαι δούλους, ...
Resp. 480 b 12 καὶ διὰ τοῦτο ἐν τῷ ἀναπνεῖν καὶ ἐκπνεῖν ἐστὶ τὸ ζῆν; cp. 480 b 19-20 διὸ κἀκείνοις τοῦ ζῆν καὶ μὴ ζῆν τὸ τέλος ἐστὶν ἐν τῷ ἀναπνεῖν, καὶ τούτοις ἐν τῷ δέχεσθαι τὸ ὑγρόν.
Rhet. 1370 a 27-9 ἐπεὶ δ' ἐστὶ τὸ ἥδεσθαι ἐν τῷ αἰσθάνεσθαί τινος πάθους, ἡ δὲ φαντασία ἐστὶν αἴσθησίς τις ἀσθενής, ...
CP II.11.3 τὸ δὲ μακρόβιον ἐν τῷ ἰσχύειν ("longevity lies in strength" tr. EINARSON/LINK), ἰσχυρὸν δὲ τὸ πυκνὸν καὶ στέριφον.
III.20.7 ἡ κατεργασία δὲ ἐν τῷ νεᾶν (ploughing) κατ' ἀμφοτέρας τὰς ὥρας, καὶ θέρους καὶ χειμῶνος, ...

(See EUCKEN (1868) 23; MÜLLER (1878) 6.)

For the idea that sense-perception consists in, or is some kind of, being affected compare

Arist. *DA* 416 b 33 ἡ δ' αἴσθησις ἐν τῷ κινεῖσθαί τε καὶ πάσχειν συμβαίνει ...· δοκεῖ γὰρ ἀλλοίωσίς τις εἶναι.
424 a 1 τὸ γὰρ αἰσθάνεσθαι πάσχειν τι ἐστίν

—See however Aristotle's attempt to dissociate these phenomena in *Philos.* Fr. 24, above.

δι' ἑτέρων "(being affected) through other things"; the prepositional phrase expresses the route taken,[1] and thus seems to involve a (local) contrast to ἐν ψυχῇ: see below.

διά + gen. may refer either (1) to πόροι: e.g.

Arist. *GC* 324 b 26-9 τοῖς μὲν οὖν δοκεῖ πάσχειν ἕκαστον διά τινων πόρων εἰσιόντος τοῦ ποιοῦντος ἐσχάτου καὶ κυριωτάτου, καὶ τοῦτον τὸν τρόπον καὶ ὁρᾶν καὶ ἀκούειν ἡμᾶς φασὶ καὶ τὰς ἄλλας αἰσθήσεις αἰσθάνεθαι πάσας· ...

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bodies anyway. Nevertheless, judging by the *Metaphysics*, I find it hard to believe that Th. would have subscribed to the distinction Simplicius ascribes to him. The problem of conflicting testimonies does not concern us here; it may be noted, however, that GOTTSCHALK (1967) 23 adduces the Simplicius passage in support of his rejection of STEINMETZ' conception of Th.' views on the nature of the heavenly bodies.

[1] *Contra* R-F: "by things other than ourselves"; so TRICOT, REALE, L-M; see below.

Sens. 26 (Alcmaeon says) ἁπάσας δὲ τὰς αἰσθήσεις συνηρτῆσθαί πως πρὸς τὸν ἐγκέφαλον· διὸ καὶ πηροῦσθαι κινουμένου καὶ μεταλλάττοντος τὴν χώραν· ἐπιλαμβάνειν γὰρ τοὺς πόρους, δι' ὧν αἱ αἰσθήσεις.[1]

—but see STRATTON (1917) 21 "[Th.] rejects the idea that our sensations are due to the action of substances that fit into the 'pores' of our sense organs: how could we in any such way perceive the rough and the smooth?" (referring to *Sens.* 20)—

or (2) to the senses:

Plato *Tht.* 184 C 5-9 ἀπόκρισις ποτέρα ὀρθοτέρα, ᾧ ὁρῶμεν τοῦτο εἶναι ὀφθαλμούς, ἢ δι' οὗ ὁρῶμεν, καὶ ᾧ ἀκούομεν ὦτα, ἢ δι' οὗ ἀκούομεν; [Θ.:] δι' ὧν ἕκαστα αἰσθανόμεθα ... μᾶλλον ἢ οἷς.

Sens. 6 (Plato's view:) φωνὴν γὰρ εἶναι πληγὴν ὑπ' ἀέρος ἐγκεφάλου καὶ αἵματος δι' των μέχρι ψυχῆς, ...

57 ἄτοπον δὲ καὶ ἴδιον (τὸ) κατὰ πᾶν τὸ σῶμα τὸν ψόφον εἰσιέναι, καὶ ὅταν *εἰσέλθῃ διὰ τῆς ἀκοῆς* διαχεῖσθαι κατὰ πᾶν, ὥσπερ οὐ ταῖς ἀκοαῖς, ἀλλ' ὅλῳ τῷ σώματι τὴν αἴσθησιν οὖσαν. οὐ γὰρ κἂν συμπάσχῃ τι τῇ ἀκοῇ, διὰ τοῦτο καὶ αἰσθάνεται.

85 (Plato says) φωνὴν δὲ εἶναι πληγὴν ὑπὸ ἀέρος ἐγκεφάλου καὶ αἵματος *δι' ὤτων μέχρι ψυχῆς*·

Arist. *Protr.* B 75 D. αἴσθησις δὲ πᾶσα δύναμίς ἐστι γνωριστικὴ διὰ σώματος, ὥσπερ ἡ ἀκοὴ τοῦ ψόφου αἰσθάνεται διὰ τῶν ὤτων.,

or (3) to 'media' like air:[2]

Arist. *DA* 423 b 1-17 πότερον οὖν πάντων ὁμοίως ἐστὶν ἡ αἴσθησις, ἢ ἄλλων ἄλλως, καθάπερ νῦν δοκεῖ ἡ μὲν γεῦσις καὶ ἡ ἁφὴ τῷ ἅπτεσθαι, αἱ δ' ἄλλαι ἄποθεν. τὸ δ' οὐκ ἔστιν, ἀλλὰ καὶ τὸ σκληρὸν καὶ τὸ μαλακὸν *δι' ἑτέρων αἰσθανόμεθα*, ὥσπερ καὶ τὸ ψοφητικὸν καὶ τὸ ὁρατὸν καὶ τὸ ὀσφραντόν· ἀλλὰ τὰ μὲν πόρρωθεν, τὰ δ' ἐγγύθεν.[3] διὸ λανθάνει· ἐπεὶ *αἰσθανόμεθά γε πάντων διὰ τοῦ μέσου*· ἀλλ' ἐπὶ τούτων λανθάνει. καίτοι ... κἂν εἰ *δι' ὑμένος αἰσθανοίμεθα τῶν ἁπτῶν ἁπάντων λανθάνοντος ὅτι διείργει*, ὁμοίως

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[1] "All the senses are connected in some way with the brain; consequently they are incapable of action if <the brain> is disturbed or shifts its position, for <this organ> stops up the passages through which the senses act", tr. STRATTON.

[2] Cp. STRATTON (1917) 21: "Nor will [Th.] admit that the sensory object comes into very contact with the organ or faculty of sense: nothing from the object actually penetrates to the sensitive organ and causes motion in it. Theophrastus seems here to adopt without reserve the thought of Aristotle, that all sensory objects act upon our senses through media and never by their presence direct.".
A combination of the idea of perception through media and the theory of pores is found in Arist. *GC* 324 b 29-32 (which is the continuation of the passage quoted above): ἔτι δὲ ὁρᾶσθαι [ἡμᾶς φασι] διά τε ἀέρος καὶ ὕδατος καὶ τῶν διαφανῶν, διὰ τὸ πόρους ἔχειν ἀοράτους μὲν διὰ μικρότητα, πυκνοὺς δὲ καὶ κατὰ στοῖχον, καὶ μᾶλλον ἔχειν τὰ διαφανῆ μᾶλλον.

[3] "we perceive what is hard or soft, as well as the objects of hearing, sight, and smell, through a medium, only that the latter are perceived over a greater distance than the former", *RevOT*.

ἂν ἔχοιμεν ὥσπερ καὶ νῦν ἐν τῷ ὕδατι καὶ ἐν τῷ ἀέρι· δοκοῦμεν γὰρ νῦν αὐτῶν ἅπτεσθαι καὶ οὐδὲν εἶναι διὰ μέσου. ἀλλὰ διαφέρει τὸ ἁπτὸν τῶν ὁρατῶν καὶ τῶν ψοφητικῶν, ὅτι ἐκείνων μὲν αἰσθανόμεθα τῷ τὸ μεταξὺ ποιεῖν τι ἡμᾶς,[1] τῶν δὲ ἁπτῶν οὐχ ὑπὸ τοῦ μεταξὺ ἀλλ' ἅμα τῷ μεταξύ,[2] ὥσπερ δι' ἀσπίδος πληγείς· οὐ γὰρ ἡ ἀσπὶς πληγεῖσα ἐπάταξεν, ἀλλ' ἅμ' ἄμφω συνέβη πληγῆναι.

Arist. *DA* 434 b 14 ff. αἱ γὰρ ἄλλαι αἰσθήσεις δι' ἑτέρων αἰσθάνονται, οἷον ὄσφρησις, ὄψις, ἀκοή ... (b 26 ff.) εἰ γὰρ μέλλει σώζεσθαι (sc. τὸ ζῷον), οὐ μόνον δεῖ ἁπτόμενον αἰσθάνεσθαι ἀλλὰ καὶ *ἄποθεν*. τοῦτο δ' ἂν εἴη, εἰ *διὰ τοῦ μεταξὺ αἰσθητικὸν εἴη* τῷ ἐκεῖνο μὲν ὑπὸ τοῦ αἰσθητοῦ πάσχειν καὶ κινεῖσθαι, αὐτὸ δ' ὑπ' ἐκείνου.

435 a 14-9 τὰ δὲ ἄλλα (sc. elements) ἔξω γῆς αἰσθητήρια μὲν ἂν γένοιτο, πάντα δὲ *τῷ δι' ἑτέρου αἰσθάνεσθαι ποιεῖ τὴν αἴσθησιν καὶ διὰ τῶν μεταξύ*.[3] ἡ δ' ἁφὴ τῷ αὐτῶν ἅπτεσθαί ἐστιν, διὸ καὶ τοὔνομα τοῦτο ἔχει. καίτοι καὶ τὰ ἄλλα αἰσθητήρια ἁφῇ αἰσθάνεται, ἀλλὰ δι' ἑτέρου· αὕτη δὲ δοκεῖ μόνη δι' αὑτῆς.

See Hicks *ad loc.*: "Strictly construed, this would make flesh the organ of touch, whereas A. has declared it to be the medium and not the organ 423 b 22 sq. [ἐπιτιθεμένων γὰρ ἐπὶ τὸ αἰσθητήριον οὐκ αἰσθάνεται, ἐπὶ δὲ τὴν σάρκα ἐπιτιθεμένων αἰσθάνεται· ὥστε τὸ μεταξὺ τοῦ ἁπτικοῦ ἡ σάρξ. 423 b 24 ff.[4]] But δοκεῖ implies popular opinion, to which he does not necessarily commit himself".[5]

Prisc. *Metaphr.* 14.10-2 ἡ δὲ ὄσφρησίς, φησί, διὰ τοῦ ἀέρος ὥσπερ ἀναμιγνυμένου πως ἔοικε καὶ πάσχοντος, ἡ δὲ ἀκοὴ σχηματιζομένου. (*et passim*).

It seems that R-F' "depend on our being affected by things other than ourselves" (see above; similarly Tricot, Reale, L-M) would rather have been expressed by ὑφ' ἑτέρων; see e.g.

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1 "because the medium produces a certain effect upon us" *RevOT.*

2 "we are affected not *by* but *along with* the medium" *RevOT.*

3 "but all of them bring about perception only through something else, viz. through the media" *RevOT.*

4 Cp. also *PA* 656 b 35 f. οὐκ ἔστι τὸ πρῶτον αἰσθητήριον ἡ σὰρξ καὶ τὸ τοιοῦτον μόριον, ἀλλ' ἐντός ("the primary sense-organ of touch is not the flesh or a corresponding part, but something internal" tr. Forster). "La thèse généralement admise dans le *Traité des Parties* est que la chair constitue l'organe du toucher. Cependant, à 656 b 34-35, l'auteur affirme que l'organe du toucher n'est pas la chair ou une partie analogue, mais que cet organe est interne, ce qui annonce déjà certains développements du *Traité de l'Ame.*", Louis (1956) XXVII.

5 "His general doctrine that sense perception always involves some intermediary between object and sensory organ does not seem to have been surrendered by Theophrastus, any more than by Aristotle, even in the case of touch; although ... there were certain senses that operated by touch or contact, in the looser meaning of the term." Stratton (1917) 46.
Cp. 294.1-4 FHS&G (= Prisc. *Metaphr.* 18.7 ff.) βούλεται δὲ ὁ Ἀριστοτέλης, ᾧ καὶ Θεόφραστος ἕπεται, μὴ τὴν γλῶτταν εἶναι τὸ ὄντως αἰσθητήριον τῆς γεύσεως, μηδὲ τὴν σάρκα τῆς ἁφῆς, ἀλλὰ ἀναλογεῖν ταῦτα τοῖς μεταξὺ γινομένοις ἐπὶ ὄψεως καὶ ἀκοῆς. καὶ γὰρ ἐπὶ ἁφῆς καὶ γεύσεως δεῖ μὲν εἶναι τὸ μεταξύ, (κ.τ.λ.).

Arist. *DA* 434 b 28-9 εἰ διὰ τοῦ μεταξὺ αἰσθητικὸν εἴη τῷ ἐκεῖνο μὲν ὑπὸ τοῦ αἰσθητοῦ πάσχειν καὶ κινεῖσθαι, αὐτὸ δ' ὑπ' ἐκείνου (contrast ὑπὸ τοῦ μεταξὺ 423 b 14-5, above);

Sens. 82 περὶ δὲ ὀσμῆς προσαφορίζειν παρῆκεν πλὴν τοσοῦτον, ὅτι τὸ λεπτὸν ἀπορρέον ἀπὸ τῶν βαρέων ποεῖ (sc. Democritus) τὴν ὀδμήν. ποῖον δέ τι τὴν φύσιν ὂν ὑπὸ τίνος πάσχει, οὐκέτι προσέθηκεν, ὅπερ ἴσως ἦν κυριώτατον. Cp. also Prisc. *Metaphr.* 2.2 below (πάσχει δὲ ὑπὸ τῶν αἰσθητῶν τὰ αἰσθητήρια), *et passim.*

In the present context it may have intentionally been left vague whether δι' ἑτέρων refers to sense organs or to media. The point obviously is that, although it is true that αἴσθησις depends on being physically affected, the phenomenon of αἴσθησις in itself does involve soul all the same. (Plato *Tht.* 186 C 1-2 αἰσθάνεσθαι ... ὅσα διὰ τοῦ σώματος παθήματα ἐπὶ τὴν ψυχὴν τείνει; in Arist. *Sens.* 436 a 9 both αἴσθησις and ὄρεξις appear among the animal's "most important characteristics" (τὰ μέγιστα), which are *κοινὰ τῆς ψυχῆς ... καὶ τοῦ σώματος.*)

ἐν ψυχῇ is Ross' conjecture for the manuscript reading ἔμψυχοι which does not make sense:

"wenn auch die Organe, so können deshalb noch nicht die Wahrnehmungen beseelt genannt werden.", Usener (1861) 267, who quotes πάσχει δὲ ὑπὸ τῶν αἰσθητῶν τὰ αἰσθητήρια οὐχ ὡς [τὰ] ἄψυχα ἀλλὰ ζῶντος σώματος τὸ πάθος, Prisc. 273.21. Usener himself conjectures ὡς ἐμψύχοις[1] ("den genannten ἀνθρώποις καὶ ζῴοις" (268); but see above), which however fails to make sense of the contrast καίπερ ... ὅμως. In fact, the forcefulness of the contrast (πάσχειν) δι' ἑτέρων vs. ἐν ψυχῇ (γίνονται) favours Ross' conjecture.

Contra Grumach, who objects that "die beide Besserungsvorschläge den Anstoss nicht beseitigen, sondern nur einen störenden Nebensinn hereinbringen: nicht dass die Wahrnehmungen nur bei beseelten Wesen oder in der Seele zustande kommen, soll gesagt werden, sondern dass sie seelische Tätigkeit darstellen, Akte des 'Nehmens' und daher nicht nur ein blosses Leiden sind." (1932) 61 n. 2.

L-M *ad loc.*: "La critique que Grumach ... adresse à ces conjectures, de ne pas offrir un terme proprement antithétique par rapport à ἐν τῷ πάσχειν, ne paraît pas décisive; même s'il est vrai que, pour Théophraste, l'âme semble d'une certaine manière être active dans la sensation (voir 7 b 19-20 ...), l'important est ici que les objets extérieurs ne pourraient l'affecter si elle n'était là." As has been argued above, however, the relevant contrast consists in δι' ἑτέρων (which refers to the physical route taken, not to external objects) as contrasted with ἐν ψύχῃ—a *local* contrast as it were—rather than in ἐν τῷ πάσχειν as contrasted with some

[1] ἐμψύχοις Usener (1890).

counterpart in the sphere of τὸ ποιεῖν; and such a counterpart certainly is hard to find, given the combination of the verb γίνονται with αἱ αἰσθήσεις as its subject.

If Ross is right and ἐν ψυχῇ γίνονται in fact is how Th. himself has put it, this is not without consequences.

Sense perception, like other phenomena which are not easily accounted for, has been associated with soul throughout Greek antiquity (possibly originally in Pythagorean context?)—noticeably also when perception is distinguished from thought; e.g.

Philolaos B 13 DK (= Theol. *Arithm.* 25.17 de F.) κεφαλὰ μὲν νόου, καρδία δὲ ψυχᾶς καὶ αἰσθήσεως, ...

Pyth. An. B 15 DK (Aët. I.3.8) καὶ ἡ ἡμετέρα ψυχή, φησίν, ἐκ τετράδος σύγκειται. εἶναι γὰρ νοῦν ἐπιστήμην δόξαν αἴσθησιν, ἐξ ὧν πᾶσα τέχνη καὶ ἐπιστήμη καὶ αὐτοὶ λογικοί ἐσμεν.

Also Ps.-Plato *Def.* 414 C 5 αἴσθησις ψυχῆς φορά, Arist. *DA* 415 b 25 αἰσθάνεται δ' οὐθὲν ὃ μὴ ἔχει ψυχήν, 584A.303 FHS&G (...) πᾶσα τῶν ἀνθρώπων ἡ τῆς ψυχῆς αἴσθησις.

The idea that soul is the *instrument* by means of which sense perception takes place is found in

Plato *Tht.* 184 D 1-5 δεινὸν γάρ που, ὦ παῖ, εἰ πολλαί τινες ἐν ἡμῖν ὥσπερ ἐν δουρείοις ἵπποις αἰσθήσεις ἐγκάθηνται, ἀλλὰ μὴ εἰς μίαν τινὰ ἰδέαν, εἴτε ψυχὴν εἴτε ὅτι δεῖ καλεῖν, πάντα ταῦτα συντείνει, *ᾗ* διὰ τούτων οἷον ὀργάνων αἰσθανόμεθα ὅσα αἰσθητά.

185 D 1-4 δῆλον δὲ ὅτι καὶ ἄρτιόν τε καὶ περιττὸν ἐρωτᾷς, καὶ τἆλλα ὅσα τούτοις ἕπεται, διὰ τίνος ποτὲ τῶν τοῦ σώματος *τῇ ψυχῇ αἰσθανόμεθα.*

Arist. *DA* 414 a 12-3 ἡ ψυχὴ δὲ τοῦτο ᾧ ζῶμεν καὶ αἰσθανόμεθα καὶ διανοούμεθα πρώτως—...

432 a 1 ff. ὥστε ἡ ψυχὴ ὥσπερ ἡ χείρ ἐστιν· καὶ γὰρ ἡ χεὶρ ὄργανόν ἐστιν ὀργάνων, καὶ ὁ νοῦς εἶδος εἰδῶν καὶ ἡ αἴσθησις εἶδος αἰσθητῶν; the suggestion is that the forms of sensible objects[1] which the soul, in its turn, uses as instruments, are *in* soul: οὐ γὰρ ὁ λίθος ἐν τῇ ψυχῇ, ἀλλὰ τὸ εἶδος 431 a 1.[2]

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[1] I take it that the form of a sensible object is noetic as well: cp. Arist. *DA* 417 b 22-4 τῶν καθ' ἕκαστον ἡ κατ' ἐνέργειαν αἴσθησις, ἡ δ' ἐπιστήμη τῶν καθόλου· ταῦτα δ' ἐν αὐτῇ πώς ἐστι τῇ ψυχῇ.

[2] In *DA* 424 a 4 ff. αἴσθησις is said to operate not only as a kind of 'critical mean' but also as 'receiving' the form of the object of sense: ὡς τῆς αἰσθήσεως οἷον μεσότητός τινος οὔσης τῆς ἐν τοῖς αἰσθητοῖς ἐναντιώσεως. καὶ διὰ τοῦτο κρίνει τὰ αἰσθητά. ... (424 a 32 ff.) καὶ διὰ τί ποτε τὰ φυτὰ οὐκ αἰσθάνεται, ἔχοντά τι μόριον ψυχικὸν καὶ πάσχοντά τι ὑπὸ τῶν ἁπτῶν· καὶ γὰρ ψύχεται καὶ θερμαίνεται· αἴτιον γὰρ τὸ μὴ ἔχειν μεσότητα, μηδὲ τοιαύτην ἀρχὴν οἵαν τὰ εἴδη δέχεσθαι τῶν αἰσθητῶν, ἀλλὰ πάσχειν μετὰ τῆς ὕλης. "To perceive an object by sense, to pronounce a judgment upon it, to receive its form without the matter, are various modes of describing what is substantially one and the same act", Hicks 414 *ad loc.*

Cp. also, with regard to νοῦς Arist. *DA* 429 a 23 λέγω δὲ νοῦν ᾧ διανοεῖται καὶ ὑπολαμβάνει ἡ ψυχή.

As we have seen, sense perception is ascribed by Aristotle to the perceptive faculty (or, 'part': τὸ αἰσθητικὸν μέρος *Sens.* 449 a 7; or, 'power': see *DA* 414 a 31 ff., p. 190 above) of the soul;[1] different kinds of things are perceived by means of different parts of τὸ αἰσθητικὸν μέρος:

Arist. *Sens.* 449 a 5-7 εἰ δὲ δὴ ἄλλῳ μὲν γλυκέος ἄλλῳ δὲ λευκοῦ αἰσθάνεται ἡ ψυχὴ μέρει, ἤτοι τὸ ἐκ τούτων ἕν τί ἐστιν ἢ οὐχ ἕν. ἀλλ' ἀνάγκη ἕν· ἓν γάρ τι τὸ αἰσθητικόν ἐστι μέρος.

Mem. 453 b 9 (...) τίνι τῶν τῆς ψυχῆς μνημονεύει τὰ ζῷα, ...

Aristotle explains that the perception of different kinds of objects (or, qualities) is yet to be ascribed to a single faculty of perception (cp. Plato *Tht.* 185 E 1-2 αὐτὴ δι' αὑτῆς ἡ ψυχὴ τὰ κοινά μοι φαίνεται περὶ πάντων ἐπισκοπεῖν) by virtue of its being numerically one, though formally many:

Sens. 449 a 8-20 ἀνάγκη ἄρα ἕν τι εἶναι τῆς ψυχῆς, ᾧ ἅπαντα αἰσθάνεται, καθάπερ εἴρηται πρότερον, ἄλλο δὲ γένος δι' ἄλλου. ... (16) ὁμοίως τοίνυν θετέον καὶ ἐπὶ τῆς ψυχῆς τὸ αὐτὸ καὶ ἓν *εἶναι ἀριθμῷ τὸ αἰσθητικὸν πάντων*, τῷ μέντοι εἶναι ἕτερον καὶ ἕτερον τῶν μὲν γένει τῶν δὲ εἴδει. ὥστε καὶ αἰσθάνοιτ' ἂν ἅμα τῷ αὐτῷ καὶ ἑνί, λόγῳ δ' οὐ τῷ αὐτῷ.

Accordingly, τὸ αἰσθητικὸν μέρος seems to reappear as ἡ κοινὴ αἴσθησις,[2] the point which the movements from the different senses converge in: τῶν δὲ κοινῶν ἤδη ἔχομεν αἴσθησιν κοινήν, Arist. *DA* 425 a 27; also

Arist. *Juv.* 467 b 28-9 τῶν ἰδίων αἰσθητηρίων ἕν τι κοινόν ἐστιν αἰσθητήριον, εἰς ὃ τὰς κατ' ἐνέργειαν αἰσθήσεις ἀναγκαῖον ἀπαντᾶν, ...

Insomn. 461 a 3 ff. νύκτωρ δὲ δι' ἀργίαν τῶν κατὰ μόριον αἰσθήσεων καὶ ἀδυναμίαν τοῦ ἐνεργεῖν ... ἐπὶ τὴν ἀρχὴν τῆς αἰσθήσεως καταφέρονται (sc. αἱ κινήσεις), ...

Cp. the slightly different concept of τὸ κύριον αἰσθητήριον (ἡ κυρία αἴσθησις *Somn.* 456 a 6) in

Arist. *Somn.* 455 a 12-26 ἐπεὶ δ' ὑπάρχει καθ' ἑκάστην αἴσθησιν τὸ μέν τι ἴδιον τὸ δέ τι κοινόν, ἴδιον μὲν οἷον τῇ ὄψῃ τὸ ὁρᾶν, τῇ δ' ἀκοῇ τὸ ἀκούειν, ταῖς δ'

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[1] The faculty of sensation does not have actual existence (sc. in the sense of 'second actualtity') unless it is stimulated by the objects of sense:
Arist. *DA* 417 a 6-14 δῆλον οὖν ὅτι τὸ αἰσθητικὸν οὐκ ἔστιν ἐνεργείᾳ, ἀλλὰ δυνάμει μόνον. διὸ καθάπερ τὸ καυστὸν οὐ καίεται αὐτὸ καθ' αὑτὸ ἄνευ τοῦ καυστικοῦ· ἔκαιε γὰρ ἂν ἑαυτό, καὶ οὐθὲν ἐδεῖτο τοῦ ἐντελεχείᾳ πυρὸς ὄντος. ἐπειδὴ δὲ τὸ αἰσθάνεσθαι λέγομεν διχῶς (τό τε γὰρ δυνάμει ἀκοῦον καὶ ὁρῶν ἀκούειν καὶ ὁρᾶν λέγομεν, κἂν τύχῃ καθεῦδον, καὶ τὸ ἤδη ἐνεργοῦν), διχῶς ἂν λέγοιτο καὶ ἡ αἴσθησις, ἡ μὲν ὡς δυνάμει, ἡ δὲ ὡς ἐνεργείᾳ. ὁμοίως δὲ καὶ τὸ αἰσθάνεσθαι, τό τε δυνάμει ὂν καὶ τὸ ἐνεργείᾳ.

[2] See KAHN (1966).

ἄλλαις κατὰ τὸν αὐτὸν τρόπον· ἔστι δέ τις καὶ *κοινὴ δύναμις* ἀκολουθοῦσα πάσαις. ᾗ καὶ ὅτι ὁρᾷ καὶ ἀκούει καὶ αἰσθάνεται (οὐ γὰρ δὴ τῇ γε ὄψει ὁρᾷ ὅτι ὁρᾷ, καὶ κρίνει δὴ καὶ δύναται κρίνειν ὅτι ἕτερα τὰ γλυκέα τῶν λευκῶν οὔτε γεύσει οὔτε ὄψει οὔτ' ἀμφοῖν, ἀλλά *τινι κοινῷ μορίῳ* τῶν αἰσθητηρίων ἁπάντων· ἔστι μὲν γὰρ μία αἴσθησις, καὶ *τὸ κύριον αἰσθητήριον* ἕν, τὸ δ' εἶναι αἰσθήσει τοῦ γένους ἑκάστου ἕτερον, οἷον ψόφου καὶ χρώματος), τοῦτο δ' ἅμα τῷ ἁπτικῷ μάλισθ' ὑπάρχει (...)· φανερὸν τοίνυν ὅτι τούτου ἐστὶ πάθος ἡ ἐγρήγορσις καὶ ὁ ὕπνος.

If this is "the normal consciousness of waking life",[1] the faculty which *is* active and makes judgements during sleep (τὸ ἐπικρῖνον *Somn.* 461 b 6; τὸ κύριον καὶ τὸ ἐπικρῖνον 461 b 25) is likely to belong to the dianoetic, not to the sensitive faculty of the soul (cp. οὐδ' ὅσαι δὴ ἐν τῷ ὕπνῳ γίνονται ἀληθεῖς ἔννοιαι παρὰ τὰ φαντασμάτα 462 a 28-9).

—In the light of what has been said above, some passages pose a problem in so far as during sleep too, sense organs (at the same time as τὸ κύριον αἰσθητήριον?), *are* implicated:

Arist. *Insomn.* 459 a 1-8 ἆρ' οὖν τὸ μὲν μηδὲν ὁρᾶν (sc. ἐν τῷ ὕπνῳ) ἀληθές, *τὸ δὲ μηδὲν πάσχειν τὴν αἴσθησιν οὐκ ἀληθές, ἀλλ' ἐνδέχεται καὶ τὴν ὄψιν πάσχειν τι καὶ τὰς ἄλλας αἰσθήσεις*, ἕκαστον δὲ τούτων ὥσπερ ἐγρηγορότος· προσβάλλει μέν πως τῇ αἰσθήσει, οὐχ οὕτω δὲ ὥσπερ ἐγρηγορότος· καὶ ὁτὲ μὲν ἡ δόξα λέγει ὅτι ψεῦδος τὸ ὁρώμενον, ὥσπερ ἐγρηγορόσιν, ὁτὲ δὲ κατέχεται καὶ ἀκολουθεῖ τῷ φαντάσματι.

462 a 2-7 (...) καὶ ἐν τοῖς ὕπνοις, ἐὰν μὲν *αἰσθάνηται* ὅτι καθεύδει, καὶ τοῦ πάθους ἐν ᾧ ἡ αἴσθησις τοῦ ὑπνωτικοῦ, φαίνεται μέν, λέγει δέ τι ἐν αὐτῷ ὅτι φαίνεται μὲν Κόρισκος, οὐκ ἔστι δὲ Κόρισκος (πολλάκις γὰρ καθεύδοντος λέγει τι ἐν τῇ ψυχῇ ὅτι ἐνύπνιον τὸ φαινόμενον)· ...

Aristotle holds, to be more specific, that αἰσθήσεις consist in changes (ἡ δ' αἴσθησις ἐν τῷ κινεῖσθαί τε καὶ πάσχειν συμβαίνει, ... δοκεῖ γὰρ ἀλλοίωσίς τις εἶναι. *DA* 416 b 33 f.; cp. Th. *Sens.* 2 τὴν αἴσθησιν ... ἐν ἀλλοιώσει γίνεσθαι) in temperature (hot and cold)[2] in τὸ αἰσθητικὸν μέρος, or as he puts it elsewhere, in the κύριον αἰσθητήριον.

Arist. *MA* 701 b 13-32 ἐν δὲ τῷ ζῴῳ δύναται τὸ αὐτὸ καὶ μεῖζον καὶ ἔλαττον γίνεσθαι καὶ τὰ σχήματα μεταβάλλειν, αὐξανομένων τῶν μορίων διὰ θερμότητα καὶ πάλιν συστελλομένων διὰ ψύξιν καὶ ἀλλοιουμένων. ἀλλοιοῦσι δ' αἱ φαντασίαι καὶ αἱ αἰσθήσεις καὶ αἱ ἔννοιαι. *αἱ μὲν γὰρ αἰσθήσεις εὐθὺς ὑπάρχουσιν ἀλλοιώσεις τινὲς οὖσαι*, ἡ δὲ φαντασία καὶ ἡ νόησις τὴν τῶν πραγμάτων ἔχουσι δύναμιν· τρόπον γάρ τινα τὸ εἶδος τὸ νοούμενον τὸ τοῦ [θερμοῦ ἢ ψυχροῦ ἢ] ἡδέος ἢ φοβεροῦ τοιοῦτον τυγχάνει ὂν οἷόν περ καὶ τῶν πραγμάτων ἕκαστον, διὸ καὶ φρίττουσι καὶ φοβοῦνται νοήσαντες

[1] Kahn (1966) 74.

[2] As well as in size? See Webb (1982) 33.

μόνον. ταῦτα δὲ πάντα πάθη καὶ *ἀλλοιώσεις* εἰσίν. ἀλλοιουμένων δ' ἐν τῷ σώματι τὰ μὲν μείζω τὰ δ' ἐλάττω γίνεται. ὅτι δὲ μικρὰ μεταβολὴ γινομένη ἐν ἀρχῇ μεγάλας καὶ πολλὰς ποιεῖ διαφορὰς ἄποθεν, οὐκ ἄδηλον· οἷον τοῦ οἴακος ἀκαριαῖόν τι μεθισταμένου πολλὴ ἡ τῆς πρώρας γίνεται μετάστασις. ἔτι δὲ κατὰ θερμότητα ἢ ψύξιν ἢ κατ' ἄλλο τι τοιοῦτον πάθος ὅταν γένηται *ἀλλοίωσις περὶ τὴν καρδίαν*. καὶ ἐν ταύτῃ κατὰ μέγεθος ἐν ἀναισθήτῳ μορίῳ, πολλὴν ποιεῖ τοῦ σώματος διαφορὰν ἐρυθήμασι καὶ ὠχρότητι, καὶ φρίκαις καὶ τρόμοις καὶ τοῖς τούτων ἐναντίοις.

Thus, physical impulses,[1] which are received both through media and through the senses (or, in the case of touch, through the body as medium) are supposed to produce alterations in the perceptive faculty; in such 'physical' contexts soul, or at least the perceptive (and also the nutritive) part of it, apparently is located in the heart:

Arist. *Juv.* 469 a 5-12 ὥστ' ἀνάγκη καὶ τῆς αἰσθητικῆς καὶ τῆς θρεπτικῆς ψυχῆς *ἐν τῇ καρδίᾳ τὴν ἀρχὴν εἶναι* τοῖς ἐναίμοις· τὰ γὰρ τῶν ἄλλων μορίων ἔργα περὶ τὴν τροφὴν τοῦ ταύτης ἔργου χάριν ἐστί· δεῖ γὰρ τὸ κύριον πρὸς τὸ οὗ ἕκεκα διατελεῖν, ἀλλ' οὐκ ἐν τοῖς τούτου ἕνεκα, οἷον ἰατρὸς πρὸς τὴν ὑγίειαν. ἀλλὰ μὴν *τό γε κύριον τῶν αἰσθήσεων ἐν ταύτῃ* τοῖς ἐναίμοις πᾶσιν· *ἐν τούτῳ γὰρ ἀναγκαῖον εἶναι τὸ πάντων τῶν αἰσθητηρίων κοινὸν αἰσθητήριον.*

In the case of touch (& taste), this is obvious; in the case of sight, smell and hearing, one may be misled by the fact that the senses themselves are located in the head:

Juv. 469 a 12-23 δύο δὲ φανερῶς ἐνταῦθα συντεινούσας ὁρῶμεν, τήν τε γεῦσιν καὶ τὴν ἁφήν, ὥστε καὶ τὰς ἄλλας ἀναγκαῖον· ἐν τούτῳ μὲν γὰρ τοῖς ἄλλοις αἰσθητηρίοις ἐνδέχεται ποιεῖσθαι τὴν κίνησιν, ταῦτα δ' οὐδὲν συντείνει πρὸς τὸν ἄνω τόπον. χωρὶς δὲ τούτων, εἰ τὸ ζῆν ἐν τούτῳ τῷ μορίῳ πᾶσίν ἐστι, δῆλον ὅτι καὶ τὸν αἰσθητικὴν ἀρχὴν ἀναγκαῖον· ᾗ μὲν γὰρ ζῷον, ταύτῃ καί ζῆν φαμέν, ᾗ δ' αἰσθητικόν, ταύτῃ τὸ σῶμα ζῷον εἶναι λέγομεν.

διὰ τί δ' αἱ μὲν τῶν αἰσθήσεων φανερῶς συντείνουσι πρὸς τὴν καρδίαν, αἱ δ' εἰσὶν ἐν τῇ κεφαλῇ (διὸ καὶ δοκεῖ τισὶν αἰσθάνεσθαι τὰ ζῷα διὰ τὸν ἐγκέφαλον), τὸ δ' αἴτιον τούτων ἐν ἑτέροις εἴρηται χωρίς.

PA 656 a 27 – b 7 ὅτι μὲν οὖν ἀρχὴ τῶν αἰσθήσεών ἐστιν ὁ περὶ τὴν καρδίαν τόπος, διώρισται πρότερον ἐν τοῖς περὶ αἰσθήσεως· καὶ διότι *αἱ μὲν δύο φανερῶς ἠρτημέναι πρὸς τὴν καρδίαν εἰσίν, ἥ τε τῶν ἁπτῶν καὶ ἡ τῶν χυμῶν*, τῶν δὲ τριῶν ἡ μὲν τῆς ὀσφρήσεως μέση, *ἀκοὴ δὲ καὶ ὄψις μάλιστ' ἐν τῇ κεφαλῇ διὰ τὴν τῶν αἰσθητηρίων φύσιν εἰσί*, καὶ τούτων ἡ ὄψις πᾶσιν· ... ἡ δ' ὄψις πᾶσιν τοῖς ἔχουσιν εὐλόγως ἐστὶ περὶ τὸν ἐγκέφαλον· ὁ μὲν γὰρ

[1] κινήσεις: see e.g. Arist. *Sens.* 438 b 4-5 ἡ διὰ τούτου (sc. τοῦ μεταξύ, i.e. either φῶς or ἀήρ) κίνησίς ἐστιν ἡ ποιοῦσα τὸ ὁρᾶν.

ὑγρὸς καὶ ψυχρός, ἡ δ' ὕδωρ τὴν φύσιν ἐστίν· τοῦτο γὰρ τῶν διαφανῶν εὐφυλακτότατόν ἐστιν. ἔτι δὲ τὰς ἀκριβεστέρας τῶν αἰσθήσεων διὰ τῶν καθαρώτερον ἐχόντων τὸ αἷμα μορίων ἀναγκαῖον ἀκριβεστέρας γίνεθαι· ἐκκόπτει γὰρ ἡ τῆς ἐν τῷ αἵματι θερμότητος κίνησις τὴν αἰσθητικὴν ἐνέργειαν· διὰ ταύτας τὰς αἰτίας ἐν τῇ κεφαλῇ τούτων τὰ αἰσθητήριά ἐστιν.

The alterations, then, take place in the heart, the condition of the heart being characterized by θερμότης:[1] see e.g. Arist. *Resp.* 478 a 24-5 τὴν ἀρχὴν τῆς θερμότητος τῆς ἐν τῇ καρδίᾳ; 480 a 16-7 τοῦ θερμοῦ, ἐν ᾧ ἡ ἀρχὴ ἡ θρεπτική. Also

Arist. *Resp.* 478 b 31 – 479 a 1 *πᾶσι* μὲν οὖν ἡ φθορὰ γίνεται *διὰ θερμοῦ τινὸς ἔκλειψιν*, τοῖς δὲ τελείοις, *ἐν ᾧ τῆς οὐσίας ἡ ἀρχή*. αὕτη δ' ἐστίν ... ἐν ᾧ τό τε ἄνω καὶ τὸ κάτω συνάπτει, τοῖς μὲν φυτοῖς μέσον βλαστοῦ καὶ ῥίζης, τῶν δὲ ζῴων τοῖς μὲν ἐναίμοις *ἡ καρδία*, τοῖς δ' ἀναίμοις τὸ ἀνάλογον.

Although this comes quite close to describing this situation as an alteration which takes place *in* (the perceptive part of) soul, this way of putting it is, as far as I see, not found in Aristotle:[2] the nearest parallel seems to be *Sens.* 436 b 7 ἡ δ' αἴσθησις ὅτι διὰ σώματος γίνεται τῇ ψυχῇ ("sensation is generated in [!] the soul through the medium of the body" *RevOT*), δῆλον καὶ διὰ τοῦ λόγου καὶ τοῦ λόγου χωρίς.[3] In *Div.* 464 a 6-7 οὐδὲν κωλύει κίνησίν τινα καὶ αἴσθησιν ἀφικνεῖσθαι πρὸς τὰς ψυχὰς τὰς ἐνυπνιαζούσας, ἀφ' ὧν ἐκεῖνος (Δημόκριτος) τὰ εἴδωλα ποιεῖ καὶ τὰς ἀπορροίας, καὶ ὅπῃ δὴ ἔτυχεν ἀφικνουμένας (?!) μᾶλλον αἰσθητὰς εἶναι νύκτωρ Aristotle seems to be hiding behind Democritus.[4]

Now, it might be surmised that Aristotle avoided actually to speak of sense perceptions as taking place 'in soul'[5] because this would imply that soul has physical extension, and thus would in a certain sense be material (see *DA* 414 a 20 ff. σῶμα μὲν γὰρ οὐκ ἔστι (sc. ἡ ψυχή), σώματος δέ τι) and be in some place itself (but see *DA* 406 a 21-2 τῆς δὲ ψυχῆς ἔσται (sc. τόπος), εἴπερ φύσει κινήσεως μετέχει—Aristotle of course meaning: *quod*

[1] And, consequently, that of the principle of life: see also p. 198 nn. above.

[2] That the distinction is not immaterial to Aristotle is also suggested by *DA* 433 b 19-21 ᾧ δὲ κινεῖ ὀργάνῳ ἡ ὄρεξις, ἤδη τοῦτο σωματικόν ἐστιν· διὸ ἐν τοῖς κοινοῖς σώματος καὶ ψυχῆς ἔργοις θεωρητέον περὶ αὐτοῦ. *Mem.* 453 a 14-5 ὅτι δὲ σωματικόν τι τὸ πάθος (sc. ἡ ἀνάμνησις).

[3] Cp. Plato *Tim.* 64 B, and ARCHER-HIND *ad loc.*

[4] Cp. his own more obscure and to a certain extent non-committal way of expressing himself in *Insomn.* 461 a 6-7 (αἱ κινήσεις αἱ ἀπὸ τῶν αἰσθημάτων) ἐπὶ τὴν ἀρχὴν τῆς αἰσθήσεως καταφέρονται, and *ibid.* 461 a 30 – b 1 τῷ μὲν γὰρ ἐκεῖθεν ἀφικνεῖσθαι τὴν κίνησιν πρὸς τὴν ἀρχὴν καὶ ἐγρηγορὼς δοκεῖ ὁρᾶν καὶ ἀκούειν καὶ αἰσθάνεσθαι, 461 b 28-9 (τὸ κύριον καὶ τὸ ἐπικρῖνον) κινεῖται ὑπὸ τῶν κινήσεων τῶν ἐν τοῖς αἰσθητηρίοις· ...

[5] "In a weak sense of 'in', for the soul does not meet Aristotle's requirements for 'being in a place'", SORABJI (1974) 85 n. 62. The question the author is discussing relates to the prob-

non). As we have seen, Aristotle prefers to describe the relationship between body and soul in terms of matter and form and, quite generally speaking, it might even be said that soul is 'in' a living body as its ἐντελέχεια:

Arist. *DA* 414 a 25-8 οὕτω δὲ γίνεται καὶ κατὰ λόγον· ἑκάστου γὰρ ἡ ἐντελέχεια ἐν τῷ δυνάμει ὑπάρχοντι καὶ τῇ οἰκείᾳ ὕλῃ πέφυκεν ἐγγίνεσθαι. ὅτι μὲν οὖν ἐντελέχειά τίς ἐστι (sc. ἡ ψυχή) καὶ λόγος τοῦ δύναμιν ἔχοντος εἶναι τοιούτου, φανερὸν ἐκ τούτων.

The concept of perception-through-stimuli makes the question of the place of arrival of these stimuli all the more pressing. As long as the process is described in physical terms, i.e. in terms of heating and cooling, this role may fairly well be performed by the heart. As soon, however, as Aristotle identifies the ἀρχὴ τῶν αἰσθήσεων or the ἀρχὴ τῆς οὐσίας with ὁ περὶ τὴν καρδίαν τόπος or with ἡ καρδία (see *PA* 656 a 28, *Resp.* 478 b 33 above), he is evidently walking on a tightrope.

That these problems are caused by Aristotle's wanting to maintain the immaterial nature of (at least some part or aspect of) soul[1] may be deduced from the fact that Aristotle *does* allow soul to be conceived of as the 'place' of *noetic* entities, apparently because in the case of immaterial entities expressions like ἐν τῇ ψυχῇ do not imply extension (and thus susceptibility of being affected): see *DA* 417 b 23-4 ταῦτα (sc.τὰ καθόλου) δ' ἐν αὐτῇ πώς ἐστι τῇ ψυχῇ. (Cp. the fact that the term κίνησις proved to be less objectionable in the case of the dianoetic faculty of the soul: see p. 194 n. 1 above). Accordingly, in soul *mental* κινήσεις may arise *from* sensation:

Arist. *Mem.* 451 a 1-5 (...) ἔν τε τῇ ψυχῇ τὸ μὲν γίνεται ὥσπερ νόημα μόνον, τὸ δ' ὡς ἐκεῖ ὅτι εἰκών, μνημόνευμα. καὶ διὰ τοῦτο ἐνίοτ' οὐκ ἴσμεν, *ἐγγινομένων ἡμῖν ἐν τῇ ψυχῇ τοιούτων κινήσεων ἀπὸ τοῦ αἰσθέσθαι πρότερον*, εἰ κατὰ τὸ ᾐσθῆσθαι συμβαίνει, καὶ εἰ ἔστι μνήμη ἢ οὔ διστάζομεν· (*ibid.* 452 b 12-3 ἔστι γὰρ ἐν αὐτῇ (sc. τῇ διανοίᾳ) τὰ ὅμοια σχήματα καὶ κινήσεις);

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lems inherent, from an Aristotelian point of view, in a phrase like (ψυχὴ ...) ἀφ' ἧς καὶ αἱ ὀρέξεις *πρὸς ἕκαστον*, 5 b 4-5 above. See next note.

[1] Cp. Sorabji (1974) 85: "Instead of concluding, like the Epicureans and Stoics, that since body and soul do interact, the soul must be corporeal, Aristotle appears to be embarrassed into modifying his requirements of contact."

Sorabji is referring to *Phys.* 243 a 3 ff. (τὸ δὲ πρῶτον κινοῦν—μὴ ὡς τὸ οὗ ἕνεκεν, ἀλλ' ὅθεν ἡ ἀρχὴ τῆς κινήσεως—ἅμα τῷ κινουμένῳ ἐστί· (λέγω δὲ τὸ ἅμα, ὅτι οὐδέν ἐστιν αὐτῶν μεταξύ.), where we find Aristotle suddenly switching "to the weaker principle that what acts and what is acted on should be together, which is explained as meaning that there should be nothing in between them. There is no reference to contact or edges. ... Now that his requirement is weakened, he is able to say that animals satisfy it. For what acts (and I take it that he means the soul) is together with what is acted on (and I take it he means the body), since the former is, in a certain sense, *in* the latter, so that there is nothing in between them. Once again, the *Physics* account of the soul seems to involve hasty improvisation." (85-6).

It probably is significant that such complications are absent in e.g. the Pseudo-Aristotelian *Problemata* XXX.14, where soul features as acting and being acted upon, as moving and being moved freely in correspondence to changes in θερμότης.

This conception of soul—which I think implies that there is no need of actually identifying or locating such a thing as soul in the heavenly bodies[1]—may have been not unattractive to Th.: see *ad* εἰ μὴ ἄρα σύμφυτον αὐτῷ τὸ ὀρέγεσθαι, 6 a 10.[2]

It seems that also in the case of human beings Th. does not adhere to the idea of soul (or, νοῦς) being specifically located in the heart: see *Sens.* 47 οὐ γὰρ ἐν ἅπασι τοῖς μέρεσιν ὁ νοῦς, οἷον ἐν τοῖς σκέλεσι καὶ τοῖς ποσίν, ἀλλὰ ἐν ὡρισμένοις, δι' ὧν καὶ οἱ ἐν ἡλικίᾳ καὶ μέμνηνται καὶ φρονοῦσιν.—where, I take it, ἐν ὡρισμένοις refers to the vital parts[3] of the body as opposed to the limbs, which may be paralysed or even amputated without the mental capacities being affected by it. In *HP* I.1.4, at any rate, the fact that in the case of plants the power of growth is not restricted to particular parts (πανταχῇ ... βλαστικὸν ἅτε καὶ πανταχῇ ζῶν) apparently implies that there is no full correspondence between animals and plants.

However that may be, the conclusion cannot but be that, if Ross' conjecture is correct, Th. by using the phrase ἐν τῇ ψυχῇ while criticizing the theory of ὄρεξις on the part of the heavenly bodies as failing to take into account the phenomenon of psychic movement, expresses himself in a manner which seems to have been avoided by his predecessor.[4]

5 b 7-10 εἰ δ' οὖν ... ἡ ὄρεξις.

δ' οὖν, introduces, with dismissal of further complications concerning the origin of ὄρεξις, the issue which the argument about the involvement of soul

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[1] Although Aristotle, even where he conceives τὸ ὀρεκτικόν (which imparts movement to the body) as 'connate pneuma', assumes that is located in the heart (or its analogon): *MA* 703 a 9-16 πάντα δὲ φαίνεται τὰ ζῷα καὶ ἔχοντα πνεῦμα σύμφυτον καὶ ἰσχύοντα τούτῳ. ... τοῦτο δὲ πρὸς τὴν ἀρχὴν τὴν ψυχικὴν ἔοικεν ὁμοίως ἔχειν ὥσπερ τὸ ἐν ταῖς καμπαῖς σημεῖον ("the point in the joints" tr. NUSSBAUM) τὸ κινοῦν καὶ κινούμενον, πρὸς τὸ ἀκίνητον. ἐπεὶ δ' ἡ ἀρχὴ τοῖς μὲν ἐν τῇ καρδίᾳ τοῖς δ' ἐν τῷ ἀνάλογον, διὰ τοῦτο καὶ τὸ σύμφυτον ἐνταῦθα φαίνεται ὄν.

[2] Cp., in quite a different context, 716.7-9 FHS&G (= Porph. *In Ptol. Harm.* 1.3): ἔστι γὰρ τὸ γινόμενον κίνημα μελῳδητικὸν περὶ τὴν ψυχὴν σφόδρα ἀκριβές, ὁπόταν φωνῇ ἐθελήσῃ ἑρμηνεύειν αὐτό, τρέπει μὲν τήνδε, τρέπει δ' ἐφ' ὅσον οἷά τ' ἐστὶ τὴν ἄλογον τρέψαι, καθ' ὃ ἐθέλει· ...

[3] Unless the plural ἐν ὡρισμένοις be merely elicited by its opposite ἐν ἅπασι. Neither, it may be noted, does ἐν ὡρισμένοις suggest that Th. "replaced the seat of intelligence in the brain, instead of putting it in the heart as Aristotle did", as SARTON (1952) 550 surmises.

[4] Note that in 439 FHS&G (Alb. Magn. *De quind. probl.* 9) Albert is censuring both Aristotle and Th. for having neglected the difference between the passions of the soul and physical passions.

has been leading up to:[1] if it is true that all ὄρεξις originates in soul (which involves κίνησις), circular movement cannot possibly be the supreme kind of movement as Aristotle suggests: see also 5 b 23 εἴπερ ἡ κυκλικὴ τοιαύτη and 5 b 26 – 6 a 2. The criticism amounts to pointing out an inconsistency between the theory that the heavenly bodies are motivated by ὄρεξις and the supposition that they derive from it the best kind of movement: if the theory is true, they would *already have* something better.

I do not think that Th., apart from pointing out the inconsistency in the Aristotelian theory, intends to propose (or even implicitly proposes) an alternative solution: *contra* LONGRIGG (1975) 218: "Theophrastus' objection, then, is that the thing desired cannot be the first cause of movement, since the perception of the thing desired involves an active movement,[2] which precedes the movement of desire. The soul of the first-moved body must, therefore, be held to be the first cause of movement. Thus Aristiotle's theory actually presupposes that the soul possessed by the stars is the first real mover and logically entails the position of Plato."

As has been said above (p. 216), it is doubtful whether Th. did ascribe a soul to the individual heavenly bodies;[3] his conceiving of soul (or its analogon) as the first cause of the movement of the universe, is likely not only in view of 10 a 9 ff., but may also be deduced from

159.27-30 FHS&G (= Procl. *In Tim.* 35 A) ὁ μὲν Θεόφραστος εἰκότως ἀρχὴν κινήσεως τὴν ψυχὴν εἰπὼν οὐδὲν ἄλλο πρὸ αὐτῆς ὑποθέμενος, ἀρχῆς οὐκ οἴεται δεῖν ἀρχὴν ἐπιζητεῖν· ἔμψυχον γὰρ καὶ αὐτὸς εἶναι δίδωσι τὸν οὐρανὸν καὶ διὰ τοῦτο θεῖον· ...

See also *ad* ἔμψυχ' ἂν εἴη, 5 b 2.

(τῆς κυκλικῆς) **αἴτιον** may be an adjective, as R-F have it;[4] on the other hand, although τὸ πρῶτον is often used absolutely ("first thing"),[5] it may be felt here that αἴτιον in a way contributes to interpreting τὸ πρῶτον as τὸ πρῶτον *sc. αἴτιον*. However that may be, τὸ πρῶτον obviously refers to the specific first cause adopted by the theory of ὄρεξις discussed, i.e. τὸ ὀρεκτόν: see 5 a 2-4 ἡ τοῦ ὀρεκτοῦ φύσις, ἀφ' ἧς ἡ κυκλικὴ ἡ συνεχὴς καὶ ἄπαυστος.

The potential optative in combination with a negative (**οὐ ... ἂν εἴη**) expresses the denial of a possiblity ("it cannot possibly be" rather than "it will

[1] *Contra* L-M "Mais si ce qui est premier est effectivement cause du [mouvement] circulaire"; "effectivement" is L-M's rendering of εἰ δ'οὖν, for which they refer to DENNISTON 465: "particularly used when a speaker hypothetically grants a supposition which he denies, doubts, or reprobates". But see e.g. (4 a 13 ff. εὐλογώτερον δ' οὖν ... .) εἰ δ'οὖν οὕτω, ... 4 a 17.

[2] But see *ad* δι' ἑτέρων 5 b 6.

[3] In spite of 163 FHS&G (= *Depository of Wisdom Literature*, saying no. 5).

[4] R-F Index, s.v.

[5] See 4 a 2-3, 4 b 11, 5 b 14, 6 a 1.

not be" R-F, "egli non sarà" REALE, "ce ne sera pas" L-M; even less apt is "celui-ci ne saurait être" TRICOT). With (οὐ) **τῆς ἀρίστης** Th. is turning back on his predecessor the pretension referred to in 5 a 20-1 and 5 a 28 – b 1; this once again shows that he is combating Aristotle on his own ground.

The argument (**γάρ**) in **κρεῖττον ... ἡ τῆς ψυχῆς** is in accordance with Aristotelian theory: see Arist. *DA* 410 b 12-5 τῆς δὲ ψυχῆς εἶναί τι κρεῖττον καὶ ἄρχον ἀδύνατον· ἀδυνατώτερον δ' ἔτι τοῦ νοῦ· εὔλογον γὰρ τοῦτον εἶναι προγενέστατον καὶ κύριον κατὰ φύσιν, ...; 159.31-2 FHS&G οὐδὲν γὰρ τίμιον ἄνευ ψυχῆς. Compare, in quite a different context, *SVF* II.191.37-8 τὸ γὰρ ζῷον τοῦ μὴ ζῴου κρεῖττον.

As has been argued earlier (see *ad* 5 b 3 ψυχὴ δ' ἅμα ... καὶ κίνησις, p. 194 ff. above), the phrase ἡ τῆς ψυχῆς (sc. κίνησις) is controversial where Aristotelian theory is concerned. This seems to be less so in the case of the more metaphorical 'noetic' movement **ἡ τῆς διανοίας** (sc. κίνησις); see Arist. *Insomn.* 461 b 6-7 ἐὰν τὸ ἐπικρῖνον κατέχηται ἢ μὴ κινῆται τὴν οἰκείαν κίνησιν; *Met.* 1072 a 30 νοῦς δὲ ὑπὸ τοῦ νοητοῦ κινεῖται (below); see also *ad* ἐν ψυχῇ, pp. 215-6 above. On the other hand, this type of expression, again, seems to be rather more frequent in pseudo-Aristotelian sources: Ps.-Arist. *Probl.* 956 b 39 f. ἡ διάνοια ... ἐνέργει, also 957 a 7 ἱσταμένης τῆς διανοίας; Ps.-Arist. *Lin. insec.* 968 a 25-6 ταχίστη δ' ἡ τῆς διανοίας κίνησις.

As we have seen (*ad* ἄλλως τε καί 5 a 28), the minimum condition, in Aristotelian terms, for having a διάνοια (*cogitandi facultas*, BONITZ s.v.) is to be human (or its equivalent) or even something superior to that: *DA* 414 b 18-9 ἑτέροις δὲ καὶ τὸ διανοητικόν τε καὶ νοῦς, οἷον ἀνθρώποις καὶ εἴ τι τοιοῦτον ἕτερόν ἐστιν ἢ καὶ τιμιώτερον. Other ζῷα have φαντασία only: *ibid.* 433 a 12. **δή**, then, will not have been wasted on a Peripatetic audience. For a rather more trivial instance of the 'Steigerung' effected by **πρώτη ... καὶ μάλιστα** ("first and foremost", "pre-eminently") cp.

> *Sud.* 33 τὸ δὲ πρόσωπον μάλισθ' ἱδρῶσιν ἀσαρκότερον ὂν καὶ ἥκιστα πονοῦν ὅτι καὶ ἡ κεφαλὴ ὑγρὰ καὶ μανή· ὑγρότητος δὲ καὶ μανότητος ἄλλα τε πολλὰ σημεῖα καὶ ὁ ἐγκέφαλος καὶ ἡ τριχῶν ἔκφυσις, ὁ μὲν τὸ ὑγρὸν αἱ δὲ τὸ μανὸν ἀποδηλοῦσαι, διὸ καὶ *πρῶτον καὶ μάλισθ'* ἱδρῶσι τὸ μετῶπον· τοῦτο γὰρ ὑπὸ τὸν ἐγκέφαλον.

The feminine gender of πρώτη being due to some sort of attraction to ἡ τῆς ψυχῆς (sc. κίνησις),[1] I take it that the phrase qualifies, rather loosely, an implied verbal notion like κρεῖττόν ἐστι (cp. R-F: "first and above all").

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[1] Cp., perhaps, *CP* II.10.3 μόνα δὲ ἢ (EINARSON/LINK, Wimmer; ἢ καὶ Schneider; καὶ U) μάλιστα τῶν πολυκάρπων αὔξησιν λαμβάνει μεγέθους ἄμπελος καὶ συκῆ· δύναται γὰρ ἡ

Contra L-M "et à coup sûr le premier mouvement et [le mouvement] par excellence est celui de la pensée". This, I think, would rather have been expressed by means of *πρώτη δὴ καὶ κρατίστη. Furthermore, in the present context an interpretation of πρωτή as first in time or even in order is hardly apposite, since the point at issue rather is that the theory of a 'desire for the best' ignores a movement which is qualitatively better.

For **ἀφ' ἧς καί**, see *ad* ἀφ' ἧς καὶ αἱ ὀρέξεις 5 b 4. Desire in general may originate in different faculties of the soul:

Arist. *DA* 432 b 3-7 πρὸς δὲ τούτοις τὸ ὀρεκτικόν (sc. μόριον τῆς ψυχῆς), ὃ καὶ λόγῳ καὶ δυνάμει ἕτερον ἂν δόξειεν εἶναι πάντων. καὶ ἄτοπον δὴ τοῦτο διασπᾶν· ἔν τε τῷ λογιστικῷ γὰρ ἡ βούλησις γίνεται, καὶ ἐν τῷ ἀλόγῳ ἡ ἐπιθυμία καὶ ὁ θυμός· εἰ δὲ τρία ἡ ψυχή, ἐν ἑκάστῳ ἔσται ἡ ὄρεξις.

In the case of living beings which are endowed with νοῦς (or διάνοια) desire, because choice is involved, originates particularly in the (dia)noetic faculty of the soul (which operates as a moving cause attracted by the object of desire) see

Arist. *Met.* 1072 a 29-30 ὀρεγόμεθα δὲ διότι δοκεῖ μᾶλλον ἢ δοκεῖ διότι ὀρεγόμεθα· ἀρχὴ γὰρ ἡ νόησις. νοῦς δὲ ὑπὸ τοῦ νοητοῦ κινεῖται, ...

DA 433 a 17-20 ὥστε εὐλόγως δύο ταῦτα φαίνεται τὰ κινοῦντα, ὄρεξις καὶ διάνοια πρακτική· τὸ ὀρεκτὸν γὰρ κινεῖ, καὶ διὰ τοῦτο ἡ διάνοια κινεῖ, ὅτι ἀρχὴ αὐτῆς ἐστι τὸ ὀρεκτόν.

433 b 10-2 (...) εἴδει μὲν ἓν ἂν εἴη τὸ κινοῦν τὸ ὀρεκτικόν, ᾗ ὀρεκτικόν, πρῶτον δὲ πάντων τὸ ὀρεκτόν (τοῦτο γὰρ κινεῖ οὐ κινούμενον τῷ νοηθῆναι ἢ φαντασθῆναι) ...

MA 700 b 23-5 ὥστε κινεῖ πρῶτον τὸ ὀρεκτὸν καὶ τὸ διανοητόν· οὐ πᾶν δὲ τὸ διανοητόν, ἀλλὰ τὸ τῶν πρακτῶν τέλος.

EN 1139 a 31 – b 5 πράξεως μὲν οὖν ἀρχὴ προαίρεσις—ὅθεν ἡ κίνησις ἀλλ' οὐχ οὗ ἕνεκα—προαιρέσεως δὲ ἡ ὄρεξις καὶ λόγος ὁ ἕνεκά τινος· διὸ οὔτ' ἄνευ νοῦ καὶ διανοίας οὔτ' ἄνευ ἠθικῆς ἐστιν ἕξεως ἡ προαίρεσις· εὐπραξία γὰρ καὶ τὸ ἐναντίον ἐν πράξει ἄνευ διανοίας καὶ ἤθους οὐκ ἔστιν. διάνοια δ' αὐτὴ οὐθὲν κινεῖ, ἀλλ' ἡ ἕνεκά του καὶ πρακτική· αὕτη γὰρ καὶ τῆς ποιητικῆς ἄρχει· ... διὸ ἢ ὀρεκτικὸς νοῦς ἡ προαίρεσις ἢ ὄρεξις διανοητική, καὶ τοιαύτη ἀρχὴ ἄνθρωπος.[1]

ἡ ὄρεξις, then, refers to the desire for the best ascribed to the heavenly bodies: cp. *ad* ἄλλως τε καί 5 a 28.

μὲν ἐφ' ὁποσοῦν ἐφικνεῖσθαι κληματουμένη, ... ἡ δὲ καὶ εἰς ὕψος αἴρεσθαι, καὶ πολύκλαδος γινομένη πολὺν καταλαμβάνειν τόπον.

[1] "hence choice is either desiderative thought or intellectual desire, and such an origin of action is man." *RevOT*.

The fact that in the present passage the starting-point is said to be διάνοια is not in contradiction with 271.3-7 FHS&G (= Simpl. *In Phys.* 964.31 ff.), where Th. is said to hold that "αἱ μὲν γὰρ ὀρέξεις καὶ ἐπιθυμίαι καὶ ὀργαὶ σωματικαὶ κινήσεις εἰσὶ καὶ ἀπὸ τούτου τὴν ἀρχὴν ἔχουσιν, ὅσαι δὲ κρίσεις καὶ θεωρίαι, ταύτας οὐκ ἔστιν εἰς ἕτερον ἀναγαγεῖν, ἀλλ' ἐν αὐτῇ τῇ ψυχῇ καὶ ἡ ἀρχὴ καὶ ἡ ἐνέργεια καὶ τὸ τέλος, εἴ δε[1] δὴ καὶ ὁ νοῦς κρεῖττόν τι καὶ θειότερον", ἅτε δὴ ἔξωθεν ἐπεισιὼν καὶ παντέλειος.;[2] for a desire *for the best* involves κρίσις and, as appears from καὶ πρώτη δὴ καὶ μάλιστα, διάνοια is conceived of as a faculty of the soul.
(Somewhat differently L-M *ad loc.*: "La divergence apparente peut être levée si l'on admet qu'il s'agit dans l'opuscule de mettre en évidence une contradiction interne à la position d'Aristote, puisque, chez ce dernier, le désirable est un intelligible.")

See also 271.7-9: καὶ τούτοις ἐπάγει "ὑπὲρ μὲν οὖν τούτων (sc. κρίσεις, θεωρίαι) σκεπτέον εἴ τινα χωρισμὸν ἔχει πρὸς τὸν ὅρον, *ἐπεὶ τό γε κινήσεις εἶναι καὶ ταύτας ὁμολογούμενον*".

If the heavenly bodies have a desire for the best, they, by being endowed with desire, have psychic, and even dianoetic movement, and thus the κυκλοφορία imparted to them by the alleged first cause would be a movement inferior to the one they already have.[3] And yet, as was argued in the preceding paragraph, the heavenly bodies apparently do not pursue rest, but movement. Aristotle's theory of ὄρεξις, therefore, is not only wrong in ascribing to κυκλοφορία the status of the best movement, but also involves a conduct on the part of the heavenly bodies which is utterly unlikely from a psychological point of view.

II.4 (5 b 10-26): *The sublunary entities do not show the influence of the object of desire—which is puzzling where a supreme, omnipotent principle is concerned. The only alternative is that the fault lies with the sublunary entities, so that one might raise the question whether they are worthy to be part of the cosmos—and if so, in what way. For they are not only far removed from the principle, but their ἐνέργεια is inferior too. In fact, the*

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[1] τε Wimmer; γε Diels.

[2] In the light of the present treatise, it is curious that Simplicius ascribes to Th. the doctrine that νοῦς enters the body from outside: see esp. 7 b 19-23.

[3] So the point can hardly be that "Théophraste ajoute à présent une seconde raison d'attribuer une âme aux sphères: s'il est vrai que le mouvement de l'âme, et *a fortiori* celui de la pensée, est meilleur que le mouvement spatial, refuser l'âme aux sphères revient à leur attribuer un mouvement de nature inférieure" (L-M *ad loc.*)—since, ὄρεξις being ascribed to them, the heavenly bodies surely *already have* soul.

change of place and the elementary interchange characteristic of the sublunary world occur only accidentally under the influence of the rotation of the heavenly bodies.

5 b 10-2 τάχα δὲ ... ὄντων,

For **καί** see *ad* 5 a 23. Characteristically, the question is introduced as one that *might be* raised (**τάχα ... ἄν τις ἐπιζητήσειεν**); cp. 5 b 15 ... ἄν τις ἀξιώσειεν, 5 b 19 τάχα ... ζητήσειεν ἄν τις, 6 a 6 ἄν τις ἴσως ἀπορήσειεν, 6 a 12-3 ἴσως ... ἂν εἴη ... ἀπορεῖν, 6 a 16 ἀξιώσειεν ἄν τις, 6 b 24 τάχ' ἂν ἀπορήσειέν τις, 7 b 10-1 εἰκότως ἄν τις ... ἀπορήσειεν, 10 b 23-4 ζητήσειεν ἄν τις.

After having discussed the problems concerning the conduct of the heavenly bodies, Th. with **ἐπι**ζητήσειεν moves on to a further problem with respect to the ἔφεσις assumed, i.e. the limited compass of the principle of τὸ ὀρεκτόν: assumedly this inspires the tendency involved, but it fails to extend to the level of the sublunary phenomena (see *ad* 5 a 14-6). The compound (cp. ἐπιποθεῖ 8 a 8; perhaps also ἐπιθεωρούμενα 11 b 13)[1] sometimes (apparently with non-propositional objects) merely 'intensifies', or perhaps rather implies that there is some personal[2] or natural[3] ground for seeking the object in question ("require"); but here it signifies that some further or fuller inquiry is required; cp.

CP VI.2.1 πλὴν ἴσως ἐκεῖνα ἄν τις ἐπιζητήσειε παρὰ τούτων (sc. Democritus *c.s.*), ὥστε καὶ τὸ ὑποκείμενον ἀποδιδόναι ποῖόν τι· δεῖ γὰρ εἰδέναι μὴ μόνον τὸ ποιοῦν, ἀλλὰ καὶ τὸ πάσχον (i.e. savour and sense organ respectively).

159.8-11 FHS&G (= Procl. *In Tim.* 35 A) τοιαῦτα μὲν ὁ Θεόφραστος ἐπιτιμᾷ τῷ Πλάτωνι περὶ τῆσδε τῆς ψυχογονίας, οὐδὲ ἐπὶ τῶν φυσικῶν πάντων λέγων δεῖν ἡμᾶς *ἐπιζητεῖν* τὸ διὰ τί· γελοῖον γάρ φησιν ἀπορεῖν, διὰ τί καίει τὸ πῦρ καὶ διὰ τί ψύχει ἡ χιών. (See also 159.10, *ad* 9 b 5.)

(Also *Vent.* 59 τὸ γὰρ παράλογον αἰτίαν ἐπιζητεῖ, quoted *ad* 4 a 13, p. 94.)

Arist. *DA* 411 a 9-13 διὰ τίνα γὰρ αἰτίαν ἐν μὲν τῷ ἀέρι ἢ τῷ πυρὶ οὖσα ἡ ψυχὴ οὐ ποεῖ ζῷον, ἐν δὲ τοῖς μικτοῖς, καὶ ταῦτα βελτίων ἐν τούτοις εἶναι δο-

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[1] Arist. *Cael.* 300 b 26 ἔτι δὲ τοσοῦτον ἐπανέροιτ' ἄν τις, πότερον ...

[2] One of the more telling instances is Hdt. III.36.5, of Cambyses' servants saving Croesus' life in order to be able to produce him in the contingency of Cambyses changing his mind and asking for him (εἰ ... μεταμελήσει τῷ Καμβύσῃ καὶ ἐπιζητῇ τὸν Κροῖσον).

[3] *HP* II.6.5 (λέγουσι) ἐπιζητεῖν ... μᾶλλον τὸ ναματιαῖον ὕδωρ ἢ τὸ ἐκ τοῦ Διός ("the date-palm requires spring water rather than water from the skies", tr. HORT; cp. the simple verb VIII.11.8 χώραν δὲ ὕφαμμον ζητεῖ (sc. the seed of the lupin) καὶ φαύλην μᾶλλον, τὸ δὲ ὅλον οὐκ ἐθέλει φύεσθαι ἐν διειργασμένῃ. ("It seeks sandy and poor soil for choice, and will not grow at all in cultivated soil", *ibid.*).

κοῦσα; (ἐπιζητήσειε γὰρ ἄν τις καὶ διὰ τίν' αἰτίαν ἡ ἐν τῇ ἀέρι ψυχὴ τῆς ἐν τοῖς ζῴοις βελτίων ἐστὶ καὶ ἀθανατωτέρα.)

415 a 14-6 ἀναγκαῖον δὲ τὸν μέλλοντα περὶ τούτων σκέψιν ποιεῖσθαι λαβεῖν ἕκαστον αὐτῶν τί ἐστιν, εἶθ' οὕτως περὶ τῶν ἐχομένων ἢ καὶ περὶ τῶν ἄλλων ἐπιζητεῖν.

(Also Arist. *Met.* 1090 b 14 quoted *ad* ἐπεισοδιῶδες, 4 a 14, p. 94 above.)

The question is, why only the heavenly bodies (for **τὰ κυκλικά** see 5 a 16) but none of the sublunary bodies are endowed with the alleged tendency towards the best (**ἐφετικός** being the physical counterpart of the more psychological Aristotelian notion of ὀρεκτικός, "appetitive": see *ad* περὶ τῆς ἐφέσεως, 5 a 15).

τὸ μέσον refers to the centre of the earth, which according to Aristotle is identical to the centre of the universe (συμβέβηκε δὲ ταὐτὸ μέσον εἶναι τῆς γῆς καὶ τοῦ παντός, Arist. *Cael.* 296 b 15-6).[1] In its most restricted sense **περὶ** τὸ μέσον is the region of earth and water, that is to say, the heaviest of the elements:[2]

Arist. *Meteor.* 340 b 19-22 ἐπὶ μὲν οὖν τὸ μέσον καὶ περὶ τοῦ μέσου τὸ βαρύτατόν ἐστιν καὶ ψυχρότατον ἀποκεκριμένον, γῆ γὰρ ὕδωρ· περὶ δὲ ταῦτα καὶ τὰ ἐχόμενα τούτων, ἀήρ τε καὶ ὃ διὰ συνήθειαν καλοῦμεν πῦρ, ...

In a wider sense, however, it may denote the domain of the perishable in general:

Arist. *GC* 335 a 24-6 ἐπεὶ δ' ἐστὶν ἔνια γενητὰ καὶ φθαρτά, καὶ ἡ γένεσις τυγχάνει οὖσα ἐν τῷ περὶ τὸ μέσον τόπῳ, λεκτέον περὶ πάσης γενέσεως ὁμοίως πόσαι τε καὶ τίνες αὐτῆς ἀρχαί· ...

The opposition τὰ κυκλικὰ (the heavenly bodies) **μόνον** vs. τῶν ... περὶ τὸ μέσον **οὐθέν** at first sight suggests that **τὰ** περὶ τὸ μέσον[3] is meant here to refer quite generally to the sublunary entities,[4] i.e. to all physical bodies, the celestial system (ὁ οὐρανός in the strict sense of the word) being excluded (cp. τοῦ δ' οὐρανοῦ πέρι καὶ τῶν λοιπῶν, 6 b 4-5). But more specifically τὰ περὶ τὸ μέσον may cover both (1) the 'simple' bodies (or, 'elements'), of earth, water, air and fire—which, according to Aristotle, constitute in that same order the spherical strata of the cosmos situated around the centre (τὰ

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[1] "There was here [in 5 b 10 ff.] an obvious inducement to call in question the earth's condition of rest and with it the geocentric theory in general; our philosopher, however, remained unaffected by this temptation.", GOMPERZ (1912) IV.466.

[2] Cp. Arist. *Cael.* 287 a 30 ff., quoted *ad* ἀσύνδετον 5 b 18 (p. 229-30 below).

[3] For the phrase see pp. 315-6 below.

[4] Cp. 143 FHS&G quoted *ad* ἐπεὶ καὶ αἱ αἰσθήσεις ... γίνονται 5 b 5-7 (p. 205 n. 1).

περὶ τὸ μέσον ἱδρυμένων σώματα, Arist. *Cael.* 287 a 31), and (2) the 'mixed' bodies which are compounds of the former: Arist. *GC* 334 b 31-2 ἅπαντα δὲ τὰ μικτὰ σώματα, ὅσα περὶ τὸν τοῦ μέσου τόπον ἐστίν, ἐξ ἁπάντων σύγκειται τῶν ἁπλῶν. Now, in what follows the elementary bodies (constitutive of sublunary phenomena) are particularly prominent (see esp. *ad* αὐτῇ ... γαίῃ ... αὐτῇ τε θαλάσσῃ 5 b 17, and εἰς ἄλληλα τὰς μεταβολάς 5 b 25-6). The reason that the reference of τὰ περὶ τὸ μέσον is narrowed down to the elements themselves only gradually as the argument proceeds, probably is that in discussing Aristotelian ὄρεξις one can hardly refer to the elements without being confronted with serious complications, because the notion of a fifth element having rotation for its natural motion is inconsistent (as was pointed out earlier) with the concept of a desire for an unmoved principle. Cp. p. 176 above.

This is one of the more striking instances of Th.' starting from sense-data: the assertion made by him that none of the natural entities, the heavenly bodies excluded, have this tendency towards the best, apparently is based on the observation that the sublunary entities *do not exhibit the circular motion* which allegedly is the best condition to be attained by physical bodies. (Cp. L-M *ad loc.*: "L'argument suppose évidemment que tout ce qui désire le premier moteur se meut circulairement".) See νῦν γὰρ κ.τ.λ. 5 b 21-6.

The implication of **καίπερ κινητῶν ὄντων** apparently is that there is, on the face of it, nothing in the nature of the sublunary entities to impede their being sensitive to the attraction of the first principle (cp. ὡς ἀδύνατα 5 b 13): they are capable of being attracted to the extent that they *are* capable of being moved (passive interpretation of κινητός: cf. R-F "subject to movement" (so TRICOT), L-M "mobiles" (*contra* REALE "in movimento"; REALE/CATAN "have motion").

5 b 13-4 πότερον ὡς ἀδύνατα ... τοῦ πρώτου.

For the reasoning cp. 4 a 9 ff. above; see also Introduction, p. 4. Here immediately after the disjunction (**πότερα** A ..., **ἢ** B) the unlikelihood of B is pointed out (ἀλλὰ τοῦτό γ' ἄτοπον, 5 b 14: see below), rather than that likelihood is claimed for A (εὐλογώτερον δ' οὖν, 4 a 13).

ὡς introduces the answer to the question διὰ τί (cp. *HP* III.1.1 τοῦτο δ' *οὐχ ὡς* οὐκ ἐνδεχόμενον καὶ ἄλλως, *ἀλλ' ἴσως διὰ* τὸ μὴ πειρᾶσθαι μηδένα μηδὲ φυτεύειν); it is followed first by a nominative, referring to the topic (rather than the grammatical subject) of the preceding clause: ὡς ἀδύνατα ([sc. ὄντα] τὰ περὶ τὸ μέσον), then by a genitive absolute (cp. *CP* I.20.5 ὡς οὐ δυναμένης εἰς ἄμφω διήκειν τῆς φύσεως).

The first possibility is, that the sublunary entities are incapable of receiving the attraction exercised by τὸ ὀρεκτόν: **ἀδύνατα** here of a passive capacity, or liability (cp. ὥσπερ ἄδεκτόν τι, 5 b 18, τῷ μὴ δύνασθαι δέχεσθαι 5 b 28 – 6 a 1: see Arist. *Met.* 1020 a 2 ff. τὰ γὰρ ἄλλα λέγεται δυνατὰ τῷ ... ἔχειν αὐτῶν ἄλλό τι τοιαύτην δύναμιν (because something else has such a power over them, sc. as an ἀρχὴ μεταβολῆς). ... ὁμοίως δὲ καὶ τὰ ἀδύνατα.

The idea that the lower entities do aspire to reach the first cause (i.e., that they *are* ἐφετικά) but are incapable of attaining even the second-best condition (circular motion), is absent here; for this idea see

Arist. *Cael.* 292 b 21-5 μάλιστα μὲν γὰρ ἐκείνου τυχεῖν ἄριστον πᾶσι τοῦ τέλους· εἰ δὲ μή, ἀεὶ ἄμεινόν ἐστιν ὅσῳ ἂν ἐγγύτερον ᾖ τοῦ ἀρίστου. καὶ διὰ τοῦτο ἡ μὲν γῆ ὅλως οὐ κινεῖται, τὰ δ' ἐγγὺς ὀλίγας κινήσεις· *οὐ γὰρ ἀφικνεῖται πρὸς τὸ ἔσχατον, ἀλλὰ μέχρι ὅτου δύναται τυχεῖν τῆς θειοτάτης ἀρχῆς*. ὁ δὲ πρῶτος οὐρανὸς εὐθὺς τυγχάνει διὰ μιᾶς κινήσεως, τὰ δ' ἐν μέσῳ τοῦ πρώτου καὶ τῶν ἐσχάτων ἀφικνεῖται μέν, διὰ πλειόνων δ' ἀφικνεῖται κινήσεων.

Here Th., on the basis of the observation that the sublunary entities do not show circular motion, simply draws the inference that they do not have the ἔφεσις discussed (see preceding note).

Also τοῦτο δ' ἀδύνατον ἐν ἅπασιν ὑπάρχειν διὰ τὸ πόρρω τῆς ἀρχῆς ἀφίστασθαι, *GC* 336 b 30 f.

The second possibility—to be dismissed presently—is that there is an incapacity on the part of the first principle itself, that is, of getting through to the entities occupying the sublunary region. **διικνεῖσθαι** (as opposed to ἀφικνεῖσθαι) carries the connotation of passing through an intervening substance; it is used, e.g., of the sunlight penetrating the woods to reach the earth:

CP V.14.5 ἡ γὰρ ἀργὸς (uncultivated land) ψυχροτέρα καὶ παχύτερον ἔχει τὸν ἀέρα διὰ τὸ ὑλώδης εἶναι καὶ μήτε τὸν ἥλιον ὁμοίως διικνεῖσθαι μήτε τὰ πνεύματα διαπνεῖν,

and of the senses penetrating a medium:

Ps.-Arist. *Probl.* 911 b 17-8 πολλὰ γὰρ οὐχ ὁρῶμεν ἐφ' ἃ διικνεῖται ἡ ὄψις, οἷον τὰ ἐν σκότει,

or, in the opposite direction, of external impulses getting through to the senses:

Arist. *DA* 423 a 5-6 εἰ δὲ καὶ συμφυὲς γένοιτο (sc. the hypothetical membrane stretched tightly over the flesh), θᾶττον ἔτι διικνοῖτ' ἂν ἡ αἴσθησις.

In a very similar context the term occurs in Ps.-Arist. *De Mundo* 6, in a passage highly relevant to the one here (see next note):

397 b 20 – 398 a 4 σωτὴρ μὲν γὰρ ὄντως ἁπάντων ἐστὶ καὶ γενέτωρ τῶν ὁπωσδήποτε κατὰ τόνδε τὸν κόσμον συντελουμένων ὁ θεός, οὐ μὴν αὐτουργοῦ καὶ ἐπιπόνου ζῴου κάματον ὑπομένων, ἀλλὰ δυνάμει χρώμενος ἀτρύτῳ, *δι' ἧς καὶ τῶν πόρρω δοκούντων εἶναι περιγίνεται.* τὴν μὲν οὖν ἀνωτάτω καὶ πρώτην ἕδραν αὐτὸς ἔλαχεν, ὕπατός τε διὰ τοῦτο ὠνόμασται, καὶ κατὰ τὸν ποιητὴν "ἀκροτάτῃ κορυφῇ" τοῦ σύμπαντος ἐγκαθιδρυμένος οὐρανοῦ· μάλιστα δέ πως αὐτοῦ τῆς δυνάμεως ἀπολαύει τὸ πλησίον αὐτοῦ σῶμα, καὶ ἔπειτα τὸ μετ' ἐκεῖνο, καὶ ἐφεξῆς οὕτως ἄχρι τῶν καθ' ἡμᾶς τόπων. *διὸ γῆ τε καὶ τὰ ἐπὶ τῆς γῆς ἔοικεν, ἐν ἀποστάσει πλείστῃ τῆς ἐκ θεοῦ ὄντα ὠφελείας, ἀσθενῆ καὶ ἀκατάλληλα εἶναι καὶ πολλῆς μεστὰ ταραχῆς· οὐ μὴν ἀλλὰ καὶ καθ' ὅσον ἐπὶ πᾶν διικνεῖσθαι πέφυκε τὸ θεῖον*, καὶ τὰ καθ' ἡμᾶς ὁμοίως συμβαίνει τά τε ὑπὲρ ἡμᾶς· κατὰ τὸ ἐγγιόν τε καὶ πορρωτέρω θεοῦ εἶναι μᾶλλόν τε καὶ ἧττον ὠφελείας μεταλαμβάνοντα. κρεῖττον οὖν ὑπολαβεῖν, ὃ καὶ πρέπον ἐστὶ καὶ θεῷ μάλιστα ἁρμόζον, ὡς ἡ ἐν οὐρανῷ δύναμις ἱδρυμένη καὶ τοῖς πλεῖστον ἀφεστήκοσιν, ὡς ἔνι γε εἰπεῖν, καὶ σύμπασιν αἰτία γίνεται σωτηρίας, ...

For **τοῦ πρώτου**, see *ad* αἴτιον 5 b 7. Here again the Aristotelian solution of τὸ ὀρεκτόν is presented under its 'dynamic' aspect (see *ad* 5 a 1-2—which is why it is to be rendered here by "first principle" rather than by the more neutral "first thing": see *ad* 4 b 10-1).

5 b 14-7 ἀλλὰ τοῦτό γ' ... θαλάσσῃ."

ἀλλά conveys a negative reaction to the possibility mentioned immediately before. **τοῦτο** seems to point forward while at the same time resuming the preceding, by presenting that aspect (singled out by **γε**) of οὐ διικνουμένου that causes the ἀτοπία.[1] For **ἄτοπον**, see *ad* 5 a 18; the inconsistency involved in this possibility is explained in the following (ἰσχυρότερον **γάρ**). For the phrase, compare

Ps.-Arist. *Spir.* 481 a 28 – b 4 ἡ δ' (sc. αὔξησις καὶ διαμονὴ) ἐκ τῆς ἀναπνοῆς, ὥσπερ 'Αριστογένης οἴεται ... πλείους ἔχει τὰς ἀπορίας. ἥ τε γὰρ πέψις ὑπὸ τινός; εἰκὸς μὲν γὰρ ὑπ' αὐτοῦ, καθάπερ καὶ τῶν ἄλλων. *αὐτὸ δὲ τοῦτ' ἄτοπον, εἰ* μὴ διαφέρει τοῦ ἔξω ἀέρος· οὕτω δ' ἡ θερμότης ἂν πέττοι.

With **δι' ἀσθένειαν** and **ἰσχυρότερον** the first principle is, again, presented under its dynamic (and so, one might add, its physical, i.e. non-noetic) aspect, the point being that the ἀρχή in question should be expected to have the δύναμις to account for the situation elsewhere in the cosmos (cp. the conditions laid down in Ch. I, esp. 4 a 20 ff.). The use of these terms in itself does not necessarily imply animateness, even less so that an individual is

[1] The explicitness of ἄτοπον presumably explains the use of τοῦτο instead of ἐκεῖνο: see *ad* 11 a 14.

concerned: ἀσθενής is used with reference to (δυνάμεις of) e.g. colour (*Sens.* 37), fire and heat (*Ign.*, *passim*), odour, spices (*Od.*, *passim*); ἰσχυρός is said of fire, heat, cold in *Ign.*, of odour in *Od.*, of wind in *Vent.* ('strength' being based on the degree of concentration, in e.g. *Ign.* 12, 67; *Vent.* 34). On the other hand, the use of ἀσθένεια and ἰσχυρός here obviously serves to prompt the following comparison with the Homeric Zeus (cp. δυνάμει τινὶ καὶ ὑπεροχῇ ..., ὥσπερ ἂν εἰ τὸν θεόν, 4 b 14-5); the grammatical case of both τοῦ πρώτου (5 b 14) and ἰσχυρότερον (5 b 15)—which may be either neuter or masculine—facilitates this comparison in so far as it does not render explicit the gender of the supreme entity.

The comparison, which is adduced in order to show the unlikelihood of the supposition that the limited compass of the principle's δύναμις is due to a weakness of the principle itself, here again is of the type of τὸ μᾶλλον καὶ ἧττον: cp. 4 b 14-5. In noticeable contrast with the earlier passage, it here is a (Homeric) god who represents the entity likely to be *surpassed by* the principle under discussion.[1] One would expect (**ἄν τις ἀξιώσειεν**: an argument in the εἰκός sphere, in accordance with the ἀτοπία of this possibility: see *ad* 5 a 18) the first principle to be stronger than the Homeric Zeus, who claims to be the strongest of all Olympic gods (*Il.* 8.17 γνώσετ' ἔπειθ' ὅσον εἰμὶ θεῶν κάρτιστος ἁπάντων), and who boasts that he could effortlessly haul up not only the other gods pulling at the other end of the imaginary golden rope, but earth and water along with them (**αὐτῇ ... γαίῃ ... αὐτῇ τε θαλάσσῃ**). It is relevant to note that the idea of Zeus pulling a rope (**ἐρύειν**) suits the comparison with the first principle as the object of desire: cp., again, the use of ἕλκειν (a near-equivalent of ἐρύειν) for the δύναμις of a magnetic stone, *ad* 5 a 1-2. The fact that the line cited by Th. (*Il.* 8.24) particularly involves the lowest elements earth and water, enhances the persuasiveness of the argument: since the first principle may be expected to be stronger than (or at least as strong as: see below) the Homeric Zeus, the possibility that its δύναμις would fail to reach the sublunary entities is quite unlikely; even the *lowest* levels of being are effortlessly raised by Zeus.

As has often been noted, there also seems to be a polemical aspect to the use of this quotation. Homer's picture of Zeus pulling a golden rope gave rise to a long tradition of "far-fetched allegories" (Leaf *ad loc.*), in which the rope is interpreted as a golden chain connecting the different levels of being. A significant early application of this image, relevant to the present context, is found in Aristotle, who in *MA* cites three lines from this passage in support of his argument, presumably against Plato,[2] that the first mover is outside the heavens:

[1] That is, according to the political analogon: see *ad* 4 b 13-5, p. 128 ff. above.
[2] See Nussbaum (1978) *ad loc.*

Arist. *MA* 699 b 32 – 700 a 6 ἆρα δὲ δεῖ ἀκίνητόν τι εἶναι καὶ ἠρεμοῦν ἔξω τοῦ κινουμένου, μηδὲν ὂν ἐκείνου μόριον, ἢ οὔ; καὶ τοῦτο πότερον καὶ ἐπὶ τοῦ παντὸς οὕτως ὑπάρχειν ἀναγκαῖον; ἴσως γὰρ ἂν δόξειεν ἄτοπον εἶναι, εἰ ἡ ἀρχὴ τῆς κινήσεως ἐντός. διὸ δόξειεν ἂν τοῖς οὕτως ὑπολαμβάνουσιν εὖ εἰρῆσθαι Ὁμήρῳ·

ἀλλ' οὐκ ἂν ἐρύσαιτ' ἐξ οὐρανόθεν πεδίονδε (Θ 21)
Ζῆν' ὕπατον πάντων,[1] οὐδ' εἰ μάλα πολλὰ κάμοιτε· (Θ 22)
πάντές τ' ἐξάπτεσθε θεοὶ πᾶσαί τε θέαιναι. (Θ 20)

τὸ γὰρ ὅλως ἀκίνητον ὑπ' οὐδενὸς ἐνδέχεται κινηθῆναι. ὅθεν λύεται καὶ ἡ πάλαι λεχθεῖσα ἀπορία, πότερον ἐνδέχεται ἢ οὐκ ἐνδέχεται διαλυθῆναι τὴν τοῦ οὐρανοῦ σύστασιν, εἰ ἐξ ἀκίνητου ἤρτηται ἀρχῆς.

Aristotle takes some liberty in representing the Homeric Zeus as an unshakeable power outside the changing world: "The example is in some respects inappropriate, since Zeus is neither outside the heavens nor ὅλως ἀκίνητον. He seems, in fact, to be the kind of anthropomorphic being with superior force within the system that Aristotle has rejected in the preceding arguments." (NUSSBAUM (1978) 321).

In this respect, Plato's interpretation of the passage in making the Homeric Zeus represent the heaven is more in keeping with the original:

Plato *Tht.* 153 C 9 – D 7 [ ] ... προσβιβάζω τὴν χρυσῆν σειρὰν ὡς οὐδὲν ἄλλο ἢ τὸν ἥλιον Ὅμηρος λέγει, καὶ δηλοῖ ὅτι ἕως μὲν ἂν ἡ περιφορὰ ᾖ κινουμένη καὶ ὁ ἥλιος, πάντα ἔστι καὶ σῴζεται τὰ ἐν θεοῖς τε καὶ ἀνθρώποις, εἰ δὲ σταίη τοῦτο ὥσπερ δεθέν, πάντα χρήματ' ἂν διαφθαρείη καὶ γένοιτ' ἂν τὸ λεγόμενον ἄνω κάτω πάντα; [ ] ἀλλ' ἔμοιγε δοκεῖ, ὦ Σώκρατες, ταῦτα δηλοῦν ἅπερ λέγεις.

The same could be said of the passage in Ps.-Arist. *De Mundo* in which god is said to dwell on "the loftiest crest" "ἀκροτάτῃ κορυφῇ"[2] of heaven (see preceding note), which appears to refer to the same passage in Homer.[3]

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[1] Homer's line reads Ζῆν' ὕπατον μήστωρ', but an 'adviser' concerned with the world obviously does not suit Aristotle's purposes. (Some manuscripts of *MA*, apparently correcting after Homer, read μήστωρα or, unmetrically, μήστορα πάντων: see NUSSBAUM *app. crit.*)

[2] Hom. *Il.* 8.2-3:

Ζεὺς δὲ θεῶν ἀγορὴν ποιήσατο τερπικέραυνος
ἀκροτάτῃ κορυφῇ πολυδειράδος Οὐλύμποιο.

Line 3 occurs in 1.499 too, where Zeus is sitting ἄτερ ... ἄλλων. As LEAF (*ad* 8.3) remarks, "The 'topmost peak' of Olympos is a suitable outlook for Zeus in A 499, but hardly convenient for an assembly. The line is thoughtlessly copied."—The context of the quotation in *De Mundo* suggests that the author is referring to the passage in book 8, as Plato, Aristotle, and Th. did before him.

[3] See Bos (1978/79) 150.

Th., then, in quoting this line seems to be demonstrating the inappropriateness of Aristotle's selection from the Homeric passage. Although the claim that the principle should also be *stronger* than Zeus is unnecessary in itself—it would have been sufficient to say that it should be *as strong as* the Homeric Zeus, who claims that he will lift up the lowest entities without so much as an effort—, as an argument in the sphere of τὸ μᾶλλον καὶ ἧττον the comparative is polemically effective.

Finally it is to be noted that Th. in his application of the comparison deviates from both Plato and Aristotle (as well as from the pseudo-Aristotelian *De Mundo*) in so far as in these authors the bearing of Homer's lines is upon the problem of the permanence of the cosmos (a question discussed by Th. in 6 a 5 ff.). This in itself, I think, suggests that Th.' reference is posterior to the Aristotelian use of these lines rather than *vice versa*.

5 b 18 ἀλλὰ λοιπὸν ... ἀσύνδετον εἶναι.

ἀσύνδετον coni. USENER (1890); lā muḥtamilun li-l-irtibāṭi (non accipiens coniunctionem) Isḥāq (*vid.* L-M *app. crit.*; cp. MARGOLIOUTH (1892) 196); ἀσύνθετον MSS.; ἀσύνετον coni. USENER (1861) 268.

ἀλλά summarizes the rejection of the second possibility (ἢ ὡς οὐ διικνουμένου τοῦ πρώτου, 5 b 13-4): the first possibility remains (**λοιπόν**, cp. 5 a 1). ἀλλά thus merely introduces the conclusion to the argument-by-elimination, and does not in itself imply that this conclusion in its turn is objectionable; *contra* R-F "*But* the only alternative is ..." (italics added).

As in 4 a 12 above, **ὥσπερ** indicates that the author disclaims responsibility for the following characterization of τὰ περὶ τὸ μέσον, which simply follows from the preceding argument. Seen in that perspective, the entities 'around the centre' (see *ad* 5 b 12) amount to something unreceptive (**ἄδεκτόν τι**; cp. ἀδύνατα 5 b 13), in the sense that this region apparently is impervious to the attraction of the principle of τὸ ὀρεκτόν.

δέχεσθαι is used of living beings and lifeless things alike: e.g. of the earth absorbing water (Arist. *Meteor.* 361 a 17 ὅπου δὲ πλεῖστον ὕδωρ ἡ γῆ δέχεται), of a sinew absorbing moisture (*Lass.* 1 εἰ οὖν τὸ νεῦρον μὴ δεκτικὸν ὑγρότητος), of an object catching fire (*Ign.* 61). In the sphere of animate beings the verb is frequently used of the sense-organs receiving sensory stimuli: *Sens.* 25 of the tongue, *Sens.* 50, 54 of the eye. Possibly on the analogy of sense-perception (in the strict sense of the word), δέχεσθαι is also used with non-physical objects, in cases where the ψυχή or νοῦς seems

to function as the receptive subject: in a moral sphere, being capable of happiness:

Hippodamus *ap*. Stob. 4.39.26 τῶν ζῴων τὰ μέν ἐστι δεκτικὰ τὰς εὐδαιμονίας, τὰ δὲ ἄδεκτα. καὶ δεκτικὰ μὲν ὅσα λόγον ἔχει...

and in a metaphysical context, being receptive of the good:

Hermias *ibid*. 3.11.31 τὰ δὲ ἐνθάδε, ὦ τέκνον, οἷά τ' ἐστιν ὁρᾷς ἄδεκτα τούτου τοῦ ἀγαθοῦ, φθαρτὰ παθητὰ διαλυτὰ τρεπτὰ ἀεὶ ἐναλλοιούμενα...

Cp. also, of the principles themselves

Plut. *Mor*. 1025 B οὐκ εὖ δέ τινες εἰρῆσθαι λέγουσι δύσμικτον ὑπὸ τοῦ Πλάτωνος τὴν θατέρου φύσιν, οὐκ ἄδεκτον οὖσαν ἀλλὰ καὶ φίλην μεταβολῆς·...

Also Proclus *In Parm*. 1074.26-7 ὅλως γὰρ οὐδενὸς τὸ ἕν ἐστι δεκτικόν, *ibid*. 29-30 τὸ ἄδεκτον παντῇ τῆς καταφάσεως (*ad* 5 a 12-3, p. 162 above).

As has been said above, in the present context τὰ περὶ τὸ μέσον covers both the animate and the inanimate (including, or rather *in primis*, the elementary bodies: see p. 222-3); the influence of τὸ ὀρεκτόν does not reach beyond the heavenly bodies, since the sublunary regions of the cosmos do not exhibit the κυκλοφορία which the heavenly bodies derive (as a second-best) from their desire for the principle. According to the preceding disjunction, this deficiency, if it is not of the principle, must be of the sublunary entities in that they are impervious to its influence; cp. 11 a 13 ff. below: εἰ γὰρ καὶ ἡ ὄρεξις οὕτως, ἀλλ' ἐκεῖνό γ' ἐμφαίνει διότι πολὺ τὸ οὐχ ὑπακοῦον *οὐδὲ δεχόμενον τὸ εὖ* (...)· ὀλίγον γάρ τι τὸ ἔμψυχον, ἄπειρον δὲ τὸ ἄψυχον, καὶ αὐτῶν τῶν ἐμψύχων ἀκαριαῖον, καὶ βελτίον, τὸ εἶναι. (with commentary).

Since (1) the sublunary entities do not exhibit the circular motion which they would be expected to exhibit on the supposition of an omnipotent first principle imparting circular movement by being the object of desire, and since (2) this cannot be due to a deficiency of the principle itself, *the conclusion must be that* the sublunary region is unreceptive of the attraction of the principle. This implies that ('explanatory' **καί**) this region does not belong to the same continuous whole: it must be **ἀσύνδετον** ("unconnected" sc. with the sphere of influence of τὸ ὀρεκτόν, i.e. the heavens). To apply, once more, the Aristotelian disctinction: although the sublunary region may be 'in touch' with the heavens, there can be no connection between these two (see *ad* συναφή, 4 a 9-10). Compare

Arist. *Cael*. 287 a 30 – b 1 λάβοι δ' ἄν τις καὶ ἐκ τῶν περὶ τὸ μέσον ἱδρυμένων σωμάτων ταύτην τὴν πίστιν (sc. that heaven must be spherical). εἰ γὰρ τὸ μὲν

ὕδωρ ἐστὶ περὶ τὴν γῆν, ὁ δ' ἀὴρ περὶ τὸ ὕδωρ, τὸ δὲ πῦρ περὶ τὸν ἀέρα, καὶ τὰ ἄνω σώματα κατὰ τὸν αὐτὸν λόγον (*συνεχῆ μὲν γὰρ οὐκ ἔστιν, ἅπτεται δὲ τούτων*), ...[1]

—where the point seems to be that if these bodies were continuous instead of merely 'in touch',[2] they would be moving with *the same* movement: see STOCKS *ad loc.*

Cp. also *Met.* 1016 a 5-6 συνεχὲς δὲ λέγεται οὗ ⟨ἡ⟩ κίνησις μία καθ' αὑτὸ καὶ μὴ οἷόν τε ἄλλως.[3] It should be noted, here again, that in the present argument, where the origin of movement is ascribed to the principle of τὸ ὀρεκτόν, there is no place for such a thing as natural movement: see note *ad* τῶν ... περὶ τὸ μέσον 5 b 12.

Thus, ἄδεκτόν characterizing the relation of the sublunary entities to the first principle, ἀσύνδετον apparently characterizes their relation to the heavens.

ἀσύνδετον, USENER's conjecture for MSS. ἀσύνθετον (which does not make sense here), is now supported by the Arabic translation: see above.[4]
(R-F adopt USENER's earlier conjecture ἀσύνετον ("unintelligent" R-F; likewise TRICOT), which conceiveably might signify insensibility of the sublunary entities, failing to understand what is best: compare

Eur. *IA* 394a οὐ γὰρ ἀσύνετον τὸ θεῖον, ἀλλ' ἔχει συνιέναι / τοὺς κακῶς παγέντας ὅρκους καὶ κατηναγκασμένους ("Συνετός und συνιέναι bezeichnen hier offenbar die Fähigkeit, Gut und Böse zu unterscheiden" MUEFFELMANN (1965) 161).

It is, however, quite unlikely that any understanding (even an insufficient one) would be ascribed to all sublunary entities either individually or collectively (R-F refer to ἡ τῆς διανοίας in 5 b 9-10 above; there, however, the specific desire *of the heavenly bodies* is involved: see pp. 218-20 above).

On the other hand neither can ἀσύνετος be rendered, I think, by "without an intellectual faculty"—if this is what REALE's translation means ("privo di intelligenza" with the explanation "nel senso che, non avendo ἔφεσις (= ὄρεξις), non ha l'intelligenza che, appunto, è il presupposto di quella. Abbiamo visto, infatti, che la ὄρεξις deriva dalla διάνοια", *ad loc.*).[5] ἀσύνετος rather means "lacking in

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[1] Here Aristotle is using συνεχής in the strict sense, as contrasted with e.g. *Cael.* 287 a 10-1 (πάντα γὰρ ἅπτεται καὶ συνεχῆ ἐστι ταῖς σφαίραις; cp. also *Meteor.* 341 a 3 τῷ δὲ πυρὶ ὁ ἀὴρ συνεχής ἐστιν), where the term is better rendered by "contiguous": see GUTHRIE *ad loc.*

[2] This being a condition for imparting movement as such: *GC* 323 a 21 ff.

[3] "a thing is called continuous which has by its own nature one movement and cannot have any other" *RevOT.*

[4] The term is used with a positive connotation in Plut. *Mor.* 386 A, of the independent movement of the stars: τοὺς κίνησιν αὐτοτελῆ καὶ ἀσύνδετον ἐν οὐρανῷ κινουμένους ἀστέρας.

[5] CATAN renders "lacking in thought" and translates REALE's note as "Deprived of intelligence, in the sense that it does not have ἔφεσις (= ὄρεξις), *it only has intelligence*, which is indeed its presupposition." (406 *ad loc.*; italics added).

intellectual capacities", "stupid": Eur. *Or.* 493 τούτου τίς ἀνδρῶν ἐγένετ' ἀσυνετώτερος (see also above; "dans le sens actif (...) ἀσύνετον désigne non l'absence de pensée, mais la stupidité de quelqu'un qui en est pourvu", L-M *ad loc.*); or, of things, "stupid", "unwise": Hdt. III.81.1 ὁμίλου γὰρ ἀχρηίου οὐδέν ἐστι ἀξυνετώτερον οὐδὲ ὑβριστότερον; cp. also *Ign.* 53 τοῦτο μὲν οὖν πρὸς τῷ μὴ ἀληθὲς οὐδ' ἄγαν συνετόν ("Thus this theory is not only not true to fact but is also unduly simple-minded" tr. COUTANT).

5 b 19-26 τάχα δὲ πρότερον ... τὰς μεταβολάς.

συμβαίνει γὰρ οἷον MSS.; λαμβάνει γὰρ οἷον USENER (1890); συμβαίνει γὰρ εἶναι ZELLER II.823.

The drift of the previous argument (and ἀσύνδετον in particular) may lead one to ask a preliminary question before (**πρότερον**) demanding an explanation of the fact that the tendency towards the best fails in the case of the sublunary entities (διὰ τί κ.τ.λ., 5 b 11). This is a more general question as to the status of the sublunary bodies (**ταῦτα**, i.e. τὰ περὶ τὸ μέσον), to wit whether they are parts of the cosmos at all,[1] and if so, in what way.

πῶς ἔχει succinctly prepares the complex question explicitly developed in the following disjunction (**πότερον** A **ἢ** –A, **καὶ εἰ** A, **πῶς** A). Although the structure of this question leaves no room for an unqualified affirmative answer (**μέρη**),[2] the answer that a component of the cosmos (**τοῦ οὐρανοῦ**) would *not* be part of it (**οὐ μέρη**) is *a priori* unlikely, ὁ οὐρανός being used as an equivalent of τὸ ὅλον (and of τὸ πᾶν: see 4 a 14, 21 above), in accordance with the last of the three uses of the term distinguished by Aristotle:[3]

> Arist. *Cael.* 278 b 11-21 ἕνα μὲν οὖν τρόπον οὐρανὸν λέγομεν τὴν οὐσίαν τὴν τῆς ἐσχάτης τοῦ παντὸς περιφορᾶς, ἢ σῶμα φυσικὸν τὸ ἐν τῇ ἐσχάτῃ περιφορᾷ τοῦ παντός· εἰώθαμεν γὰρ τὸ ἔσχατον καὶ τὸ ἄνω μάλιστα καλεῖν οὐρανόν, ἐν ᾧ καὶ τὸ θεῖον πᾶν ἱδρῦσθαί φαμεν. ἄλλον δ' αὖ τρόπον τὸ συνεχὲς σῶμα τῇ ἐσχάτῃ περιφορᾷ τοῦ παντός, ἐν ᾧ σελήνη καὶ ἥλιος καὶ ἔνια τῶν ἄστρων· καὶ γὰρ ταῦτα ἐν τῷ οὐράνῳ εἶναί φαμεν. ἔτι δ' ἄλλως λέγομεν οὐρανὸν τὸ περιεχόμενον σῶμα ὑπὸ τῆς ἐσχάτης περιφορᾶς· τὸ γὰρ ὅλον καὶ τὸ πᾶν εἰώθαμεν λέγειν οὐρανόν.

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[1] Cp. *HP* I.1.1.-3, where Th. is concerned with the question what should, and what should not be considered to be a 'part' of a plant: τὰ ποῖα δεῖ μέρη καὶ μὴ μέρει καλεῖν, I.1.1.

[2] In *HP* I.1.2 Th. gives a definition of a 'part' of a living organism: τὸ μὲν οὖν μέρος, *ἅτε ἐκ τῆς ἰδίας φύσεως ὄν*, ἀεὶ δοκεῖ διαμένειν ἢ ἁπλῶς ἢ ὅταν γένηται ..., πλὴν εἴ τι διὰ νόσον ἢ γῆρας ἢ πήρωσιν ἀποβάλλεται. See also Introduction, p. 26-7.

[3] In a slightly different way L-M *ad loc.* "[La demande d'éclaircissement préalable] revient à choisir entre le sens strict et le sens large d'οὐρανός"; the question clearly focuses on the sublunary entities.

In Ch. V, 8 a 3 ff. Th. suggests a possible solution for the inconsistencies involved in a rigid conception of a tendency towards the best by hinting at the possibility that the cosmos should not be conceived as something partless and monolithic (πλὴν ἴσως οὐχ ὁμοίως ληπτέον (sc. the cosmos) ὡς εἰς τὸ ἀμερὲς ἄγοντας: see note *ad loc.*). In the present passage the point of οὐ μέρη is, conversely, that the possibility of any entity being external to the cosmos (which by its very nature is all-inclusive) is a priori unlikely.

Different ways of saying that a thing is a 'part' of something else have been distinguished by Aristotle, *Met.* 1023 b 11 ff., the relevant use of μέρος obviously being εἰς ἃ διαιρεῖται ἢ ἐξ ὧν σύγκειται τὸ ὅλον (1023 b 19 ff.). Another relevant distinction concerns the use of τὸ ὅλον as "that which contains the things it contains in such a manner that they form a unity":

Arist. *Met.* 1023 b 26-36 ὅλον λέγεται (1) οὗ τε μηδὲν ἄπεστι μέρος ἐξ ὧν λέγεται ὅλον φύσει, καὶ (2) τὸ περιέχον τὰ περιεχόμενα ὥστε ἕν τι εἶναι ἐκεῖνα, τοῦτο δὲ διχῶς· ἢ γὰρ (a) ὡς ἕκαστον ἕν, ἢ (b) ὡς ἐκ τούτων τὸ ἕν. (a) τὸ μὲν γὰρ καθόλου, καὶ τὸ ὅλως λεγόμενον ὡς ὅλον τι ὄν, οὕτως ἐστὶ καθόλου ὡς πολλὰ περιέχον τῷ κατηγορεῖσθαι καθ' ἑκάστου καὶ ἓν ἅπαντα εἶναι ὡς ἕκαστον, οἷον ἄνθρωπον ἵππον θεόν, διότι ἅπαντα ζῷα· (b) τὸ δὲ συνεχὲς καὶ πεπερασμένον, ὅταν ἕν τι ἐκ πλειόνων ᾖ, ἐνυπαρχόντων μάλιστα μὲν δυνάμει, εἰ δὲ μή, ἐνεργείᾳ. τούτων δ' αὐτῶν μᾶλλον τὰ φύσει ἢ τέχνῃ τοιαῦτα, ὥσπερ καὶ ἐπὶ τοῦ ἑνὸς ἐλέγομεν, ὡς οὔσης τῆς ὁλότητος ἑνότητός τινος.

Here, then, the issue seems to be whether the sublunary phenomena—if they are, as is likely, parts of the cosmic whole—constitute a mere collection of unconnected individual entities (cp. τῶν μερῶν τῶν μὴ συνεχῶν, Arist. *Phys.* 185 b 14), or a complete, continuous whole.
Cp. 4 a 13-4 (εὐλογώτερον δ' οὖν εἶναί τινα συναφὴν καὶ μὴ ἐπεισοδιῶδες τὸ πᾶν) and 8 a 3-7, with commentary.

What follows supplies a motive for (**γάρ** 5 b 21) the question about the status of the sublunary entities within the cosmos as a whole: the manifest situation rules out the possibility of simply taking it for granted that they are μέρη of the continuous type.

For **νῦν** indicating the actual state of affairs as opposed to considerations of a theoretical nature, cp. *CP* I.13.2-3 τοῦτο μὲν οὖν ὡς καθ' ὑπόθεσιν θεωρείσθω. ἐν δὲ τῇ νῦν περιόδῳ τῶν ὡρῶν ἔοικε τὰ δένδρα ... ἀντιπληροῦσθαι πάλιν ..., and the use of νῦν δέ[1] in e.g. 6 a 23; *Sens.* 18, 20, 22 (νῦν δὲ συμβαίνει τοὐναντίον.), 71.

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[1] "id quod in re ac veritate est ei opponitur, quod per conditionem aliquam positum erat", BONITZ 492 a 61- b 1 s.v.

Contra R-F "in this account", followed by L-M: "νῦν ... renvoie à la représentation aristotélicienne du monde, telle qu'elle se dégage de la question précédente", *ad loc.*; more convincingly REALE "effettivamente".

The actual situation seems to be one rather of repulsion than of attraction: the metaphor **ἀπεωσμένα** (for **οἷον** see *ad* 4 a 10) graphically suggests that, in reality, the very opposite of the alleged attraction exercised by τὸ ὀρεκτόν obtains. For the use of the verb cp. Th.' reference to Democritus' conception of the sun as ἀπωθοῦντα[1] ἀφ' ἑαυτοῦ καὶ ἀποπληττόμενον πυκνοῦν τὸν ἀέρα, *Sens.* 54 (which Th. does not suscribe to); it is said of air that is moved on by the wind (*Vent.* 7) and of air that is dislodged to be put back afterwards under the influence of the sun (according to the process of ἀνταπόδοσις): *ibid.* 10.

The use of **τῶν ἐντιμοτάτων** ("most esteemed") rather than the more objective τῶν τιμιωτάτων seems to indicate that Th. merely borrows this superlative qualification from the theory under discussion (see εἴπερ ... τοιαύτη, below). The sublunary entities are in fact thrust away from the entities which are the most highly esteemed (the heavenly bodies). This applies not only to their place (**κατὰ τὰς χώρας**), as suggested by the literal sense of the verb and as corroborated by experience (cp. οὐ διικνουμένου 5 b 13; compare

Arist.*Cael.* 293 b 11-5 (...) τὸ δὲ τοῦ τόπου μέσον (sc. as opposed to the *mathematical* centre) ἔοικε τελευτῇ μᾶλλον ἢ ἀρχῇ· τὸ μὲν γὰρ ὁριζόμενον τὸ μέσον, τὸ δ' ὁρίζον τὸ πέρας. τιμιώτερον δὲ τὸ περιέχον καὶ τὸ πέρας ἢ τὸ περαινόμενον· τὸ μὲν γὰρ ὕλη τὸ δ' οὐσία τῆς συστάσεως ἐστίν.),

but also to their activity (**κατὰ τὴν ἐνέργειαν**). **εἴπερ** ἡ κυκλικὴ **τοιαύτη**—that is to say, more or less *ad sensum*, τιμιωτάτη (rather than ἐντιμοτάτη) κατὰ τὴν ἐνέργειαν: 'of such a nature as to deserve this particular superlative qualification'—adds the caveat that the point about the sublunary entities being thrust away from what is, where their activity is concerned, the most honourable, applies if and only if that circular movement deserves this qualification.

γάρ in 5 b 24 introduces the justification of the statement that the sublunary entities are (so to speak) thrust away from what (allegedly) is the most honourable where their ἐνέργεια is concerned. In actual fact, the influence of the rotation of the heavenly bodies is only accidental.

The manuscript reading of **συμβαίνει** involves an ellipsis of εἶναι (see ZELLER, above) in the general sense which includes γίγνεσθαι; cp. *Ign.* 10

[1] Schneider's conjecture: DK II.115 *app. crit.*

συμβαίνει δὲ καὶ ἀπόλειψίν τινα αὐτοῦ γίνεσθαι, *Sens.* 17 συμβαίνει γὰρ τῷ ὁμοίῳ γίνεσθαι τὴν γνῶσιν, *ibid.* 20 συμβαίνει δὲ καὶ τὰς ὀσμὰς ἀπορροῇ γίνεσθαι, *Vent.* 18 συμβαίνει δὲ καὶ τὰς καταπαύσεις γίνεσθαι τῶν κατὰ λόγον (*et passim*).

See HINDENLANG 89: "Theophrast scheint [in the case of γίγνεσθαι] dieselben Freiheiten zugelassen haben wie bei der Kopula. Man kann übrigens in vielen Fällen zweifeln, welches der beiden Verben zu ergänzen sei." As an instance of those cases in which γίνεσθαι is to be supplied with some certainty HINDENLANG (90) cites *HP* II.3.2. ἀλλὰ τὸ ἐνταῦθα θαυμαστὸν διὰ τὸ μίαν μόνον ἢ δύο καὶ ταύτας ἐν τῷ παντὶ χρόνῳ σπανίας "(sc. μεταβολὰς γίγνεσθαι, es folgt οὐ μὴν ἀλλ' εἴπερ συμβαίνει μᾶλλον ἐν τοῖς καρποῖς γίγνεσθαι τὴν παραλλαγήν)".

Even if the ellipsis in itself does not seem to be objectionable, one might object to the awkwardness of συμβαίνει ... κατὰ συμβεβηκός.[1] USENER's conjecture λαμβάνει (above; subject ταῦτα b 20, i.e. τὰ περὶ τὸ μέσον b 12) fits the context very well; USENER refers to the use of λαμβάνει + dative in a similar context in 10 b 28 below: ὡς ἄρα τῷ αὐτομάτῳ ταῦτα καὶ τῇ τοῦ ὅλου περιφορᾷ λαμβάνει τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς. Cp. also *CP* II.17.8 καὶ τοῦ δένδρου λαμβάνοντός τινα μεταβολὴν ὑπὸ τῆς κόπρου. Nevertheless, it seems preferable to keep to the reading of the manuscripts, supported by the Arabic translation.[2] Similarly to νῦν at the beginning of the sentence, συμβαίνει denotes what actually happens as opposed to considerations of a hypothetical nature (see above). Compare

Vent. 15 ἀλλ' ὁ ἥλιος δοκεῖ καὶ κινεῖν ἀνατέλλων καὶ καταπαύειν τὰ πνεύματα· διὸ καὶ ἐπαυξάνεται καὶ πίπτει πολλάκις. οὐ καθόλου δὲ τοῦτ' ἀληθές, ἀλλ' ἐφ' ὧν γε συμβαίνει, ταύτην ὑποληπτέον τὴν αἰτίαν.

Also χαλεπὸν δὲ πάλιν αὐτὸ τὸ τοὺς λόγους ἑκάστοις περιθεῖναι ... · πλὴν εἰ συμβαίνει τῇ ἑτέρων τάξει καὶ μεταβολῇ μορφάς τε παντοίας καὶ ποικιλίας γίνεθαι τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν, 7 a 19 – b 1.

With **μεταβολή** (rather than κίνησις) Th. opts for the generic term, covering both change of place (**εἰς τοὺς τόπους**; for locomotion as a kind of μεταβολή see Arist. *Met.* 1069 b 13 φορὰ δὲ ἡ κατὰ τόπον sc. μεταβολή) and qualitative change (i.c. elementary interchange: εἰς ἄλληλα, see below). **εἰς** τοὺς τόπους (instead of κατὰ τόπον) indicates linear as opposed to circular movement, and thus emphasizes the otherness of the movements of the sublunary entities. The article seems to have distributive force ("towards the

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[1] Cp., however, LOUIS (1964) XLV (on the subject of awkward repetitions in Aristotle's *HA*): "On sent qu' Aristote recherche plutôt la concision que l'agrément du style."
[2] MARGOLIOUTH (1892) 196.

place where each of them goes", (of things) "towards their places";[1] this may be a reference to meteorological phenomena in particular: see e.g.

> *Vent.* 10 αὐταὶ γὰρ αἱ τοῦ ἡλίου φοραὶ συνεργοῦσιν ἀμφοτέροις καὶ ἡ ἀνταπόδοσις γίνεται, καθάπερ παλιρροοῦντος τοῦ ἀέρος. *ὃ γὰρ ⟨ἂν⟩ ἀπωσθῇ* κατὰ χειμῶνα ... καὶ ἔτι πρότερον τοῦ θέρους ὑπὸ τῶν ἐτησίων καὶ τῶν ἐπὶ τούτοις, *ἀνταποδίδοται πάλιν* τοῦ ἦρος *εἰς τούσδε τοὺς τόπους*, καὶ λήγοντος μετοπώρου καὶ περὶ πλειάδος δύσιν ἀνάλογον. "The movements of the sun themselves contribute to both winds, and a restoration takes place while the air, as it were, is flowing back. For what is dislodged in the winter ... and earlier in the summer by the etesians and their successors, is restored to these places in the spring, at the end of the autumn, and at the setting of the Pleiades in proportion".

The observation that the locomotion of the sublunary entities, while being derived from the circular motion of the heavenly bodies, is in fact accidental, implies an approach of the phenomenon, to say the least, which diverges from the Aristotelian theory which derives the movements of the other bodies from the heavenly bodies *operating as a final cause*:

> Arist. *Met.* 1074 a 25-31 εἰ γὰρ πᾶν τὸ φέρον τοῦ φερομένου χάριν πέφυκε καὶ φορὰ πᾶσα φερομένου τινός ἐστιν, οὐδεμία φορὰ αὑτῆς ἂν ἕνεκα εἴη οὐδ' ἄλλης φορᾶς, ἀλλὰ τῶν ἄστρων ἕνεκα. εἰ γὰρ ἔσται φορὰ φορᾶς ἕνεκα, καὶ ἐκείνην ἑτέρου δεήσει χάριν εἶναι· ὥστ' ἐπειδὴ οὐχ οἷόν τε εἰς ἄπειρον, *τέλος ἔσται πάσης φορᾶς τῶν φερομένων τι θείων σωμάτων κατὰ τὸν οὐρανόν.*

εἰς ἄλληλα, too, apparently applies to elementary bodies in particular: cp. 10 b 3-6 (αἱ ... ἐν αὐτῇ τῇ γῇ ἀλλοιώσεις καὶ μεταβολαὶ ... πρὸς ἄλλοτ' ἄλλο μεθισταμένων, b 4-6; see pp. 296-8 below), and *Ign.* 1 ἀὴρ μὲν γὰρ καὶ ὕδωρ καὶ γῆ τὰς εἰς ἄλληλα μόνον ποιοῦνται μεταβολὰς φυσικάς. The position of the article (συμβαίνει ... εἰς ἄλληλα **τὰς** μεταβολάς) suggests that what is meant is not so much *cyclical* interchange of the elementary bodies as, taken distributively, particular instances of change of one element into the other.[2]

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[1] In the present context the interpretation "towards their natural places" would be out of place: see *ad* τῶν ... περὶ τὸ μέσον 5 b 12. The translation "relativement aux lieux" (L-M; "εἰς indique moins le terme du changement que son aspect", *ad loc.*) seems to be questionable, too.

[2] Contrast Aristotle's characterization of elementary interchange as the second-best type of μεταβολή, imitating the continuity of rotation:

Arist. *GC* 337 a 1-7 διὸ καὶ τἆλλα ὅσα μεταβάλλει εἰς ἄλληλα κατὰ τὰ πάθη καὶ τὰς δυνάμεις, οἷον τὰ ἁπλᾶ σώματα, μιμεῖται τὴν κύκλῳ φοράν· ὅταν γὰρ ἐξ ὕδατος ἀὴρ γένηται καὶ ἐξ ἀέρος πῦρ καὶ πάλιν ἐκ πυρὸς ὕδωρ, κύκλῳ φαμὲν περιεληλυθέναι τὴν γένεσιν διὰ τὸ πάλιν ἀνακάμπτειν. ὥστε καὶ ἡ εὐθεῖα φορὰ μιμουμένη τὴν κύκλῳ συνεχής ἐστιν.

According to Th., in the lower regions of the cosmos both change of place and qualitative change (particularly on the level of the elements) occur accidentally (**κατὰ συμβεβηκός**) under the influence of the circular rotation (ὑπὸ τῆς κυκλικῆς περιφορᾶς); that is to say, they *are* influenced by the rotation of the heavenly bodies, but only *per accidens*.[1] As in 6 b 20 and 25, **οἷον** introduces technical (Peripatetic) terminology, rather than a metaphorical expression; it may bespeak an awareness that the use of the term here involves a rather unorthodox valuation: the fact of the influence of the heavenly bodies on these entities being accidental implies a disqualification only from a teleological point of view: cp. 7 a 22 – b 5, 10 b 27 – 11 a 1 below.

ὑπὸ τῆς κυκλικῆς περιφορᾶς is slightly redundant: elsewhere ἡ κυκλικὴ (sc. κίνησις), e.g. 5 a 3, κυκλοφορία 5 b 28, and cp. Arist. *Meteor.* 341 b 13-4 ὑπὸ τὴν ἐγκύκλιον φοράν, 341 b 23 ὑπὸ τῆς περιφορᾶς. Unless περιφορᾶς should be deleted as a marginal gloss, the redundancy may have been meant to stress the difference between on the one hand the movement of the heavenly bodies going round and round, and on the other the linear motion, and the more or less random intermutation of elementary bodies which proceeds now in this, now in that direction: cp. πρὸς ἄλλοτ' ἄλλο, 10 b 5 (*ad* τὰς μεταβολάς, above).

II.5 (5 b 26 – 6 a 5): *As in the case of the heavenly bodies, on the assumption that the best cause produces the best effect, the sublunary entities too ought to receive something better than rotation (which in their case is lacking). The expectation that the best is coextensive with all things, however, might seem to disregard the differentiation which is essential to the cosmos.*

5 b 26 – 6 a 2 εἰ δὲ καὶ ... βουλόμενον.

This section apparently deals with the condition of the sublunary entities, this time starting from the hypothesis of an omnipotent first cause, that is, without reference to the tendency or desire—or absence of these—on the

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[1] The question at issue here recalls Aristotle's alternative way of explaining the rotation of the heavenly bodies by assuming the element of aether (*Meteor.* 339 a 12-3 ἡ τῶν ἐγκυκλίως φερομένων σωμάτων φύσις): Arist. *Meteor.* 340 b 32 – 341 a 2 οὐθὲν δὲ κωλύει καὶ διὰ τὴν κύκλῳ φορὰν κωλύεσθαι συνίστασθαι νέφη ἐν τῷ ἀνωτέρῳ τόπῳ· ῥεῖν γὰρ ἀναγκαῖον ἅπαντα τὸν κύκλῳ ἀέρα, ὅσος μὴ ἐντὸς τῆς περιφερείας λαμβάνεται τῆς ἀπαρτιζούσης ὥστε τὸν γῆν σφαιροειδῆ εἶναι πᾶσαν· ... ῥεῖ δὲ κύκλῳ διὰ τὸ *συνεφέλκεσθαι τῇ τοῦ ὅλου περιφορᾷ.*

See also Philoponus *ad loc.*: οὕτως οὖν ὁ ὑπὲρ τὴν περιφέρειαν ταύτην ἀὴρ ἐξ ἀνάγκης ἔξωθεν περιρρεῖ τῇ περιφορᾷ τῶν οὐρανίων συνεφελκόμενος ἅμα τῷ ὑπεκκαύματι, *οὐ*

part of the recipient entities, which was the topic of the preceding paragraph. On this interpretation the paragraph proceeds to a new point respecting τὰ περὶ τὸ μέσον (see 5 b 12), which constitute the grammatical subject of ἐκωλύετο, too. The emphasis put on the compass of the principle in πάντα (6 a 1) and ἅπανθ' (6 a 4) appears to support this interpretation.

The passage, then, does not return to the question of the heavenly bodies discussed in 5 b 7 ff. above, as is commonly assumed—an assumption which actually made USENER ((1861) 268-9) condemn the intermediate paragraph as an unfortunate ("ungeschickt genug", 269) insertion by the author: see the criticisms of R-F, xix-xx, whose attempts to find "points of attachment" between this paragraph and the preceding one, however, are not any more convincing (cp. their own note *ad loc.* "Thus ll. 10-26 are to some extent parenthetical").

εἰ δὲ καί adds a new argument, this time starting from the hypothesis of the teleological principle itself; this principle, which allegedly is the apogee of goodness, would be expected to bring to perfection the sublunary entities no less than the heavenly bodies. The phrase **τὸ ἄριστον ἀπὸ τοῦ ἀρίστου** probably had a familiar ring; for the idea cp. Aristotle's interpretation of Empedocles' theory of causation: τὴν μὲν φιλίαν αἰτίαν οὖσαν τῶν ἀγαθῶν τὸ δὲ νεῖκος τῶν κακῶν, *Met.* 985 a 6-7; also τὸ τῶν ἀγαθῶν ἁπάντων αἴτιον αὐτὸ τἀγαθόν ἐστιν, *ibid.* 9-10; cp. Plato *Tim.* 30 A 6-7 θέμις δ' οὔτ' ἦν οὔτ' ἔστιν τῷ ἀρίστῳ δρᾶν ἄλλο πλὴν τὸ κάλλιστον, and 29 E 1-3, quoted p. 239 below.

In Aristotle's conception of teleology, this rule does not apply without qualification: see Arist. *GA* 731 b 25-7 τὸ δὲ καλὸν καὶ τὸ θεῖον αἴτιον ἀεὶ κατὰ τὴν αὑτοῦ φύσιν τοῦ βελτίονος *ἐν τοῖς ἐνδεχομένοις*, ... (cp. *IA* 708 a 10 ff., below), *Cael.* 288 a 2-3 εἰ γὰρ ἡ φύσις ἀεὶ ποιεῖ τῶν ἐνδεχομένων τὸ βέλτιστον, ... Compare IX.2, 11 a 1 ff. below.

The fact that Th. adduces this rule at this point seems to be due to his conviction that this would be the natural consequence of a consistently teleological conception of the cosmos: see τὸ γὰρ δὴ κ.τ.λ., below. **ἂν ... δέοι** expresses what would be the case on the supposition that the rule does apply. More than ἀπό in the preceding general statement, **παρά** creates the image of an agent bestowing a kind of gift on a beneficiary—i.c. τὰ περὶ τὸ μέσον, see above.

That the Aristotelian theory still is Th.' starting-point here, appears from the following **κάλλιον ... τι ... τῆς κυκλοφορίας**, which could refer either to ἠρεμία, or, more probably, to psychic movement (see 5 b 7-10): in the sub-

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φυσικὴν ἔχων κατ' Ἀριστοτέλην *ταύτην τὴν κίνησιν, ἀλλ' ἐκ τῆς ἔξωθεν τοῦ κυκλοφορικοῦ σώματος ἀνάγκης.*

lunary region too, the majority of things lacks soul (see 11 a 13-8, and pp. 549 ff. below). κάλλιον is apposite in this context where value rather than function is involved (contrast κρεῖττον 5 b 8). It is not implied that the entities, which would be expected to receive something better than circular movement (i.e. the sublunary entities), do in fact *have* circular movement: see above. Rather the article (**τῆς** κυκλοφορίας) should be interpreted as "the rotation <we were talking about (sc. in the preceding paragraph)>", which in this context is equivalent to "the rotation <we found to be missing>".

For **εἰ μὴ ἄρ(α)** see *ad* 4 b 10, p. 122 above. As in the case of ἀδύνατα and ἄδεκτον in 5 b 13 and 5 b 18 above, where circular movement was the missing good, Th. here takes account of the theoretical possibility that the absence of the expected result is due not to a shortcoming of the agent but to a lack of susceptibility of the intended recipient. The theoretical consideration (cp. ὁ τοῦτο λέγων, 6 a 3-4) starting from the goodness of the principle, is interrupted by this idea in the manner of a comment or afterthought of the author (who, as it were, cannot help bringing in further considerations). In the reasoning too, the phrase is ignored, γάρ in 6 a 1 referring back to the preceding sentence. The difficulty that the first principle, though being the *summum* of goodness, in fact does not provide what is the best, does not obtain if the deficiency is on the part of the sublunary bodies, which (as we saw) were prevented (**ἐκωλύετο**) from receiving it by their own incapacity (since they could not even receive the second-best condition of circular movement: 5 b 18). The use of the present stem in ἐκωλύετο implies that the focus is on their own ἀδυναμία rather than on the fact of there being some obstruction.[1]

The sentence introduced by **γάρ** applies what has been said above: on the supposition that the best comes from the best, the sublunary entities would be expected to receive something even better than the circular movement we were looking for (5 b 26-8) and, as anyone can see (**δή**), the first and most divine principle is a relevant instance of this general rule, since it cannot but operate in accordance with its wish that everything is best. The purport of **πάντα τὰ ἄριστα βουλόμενον** is a lot clearer than the way in which it is put; most interpretors appear to read something like τὸ γὰρ δὴ πρῶτον καὶ θειότατον πάντα τὰ ἄριστα (sc. εἶναι/γίγνεσθαι) βουλόμενον (sc. ἐστί):[2] "is something that wishes for everything that is best" R-F; "est tel qu'il veut toutes les meilleures choses", L-M; or, with a predicative interpretation of τὰ ἄριστα, "vuole che tutte le cose siano ottime" REALE; "de-

[1] Cp. SICKING (1991) 27 ff.

[2] Cp. the manuscript reading βουλόμενον ἦν (J^2L, see L-M *app. crit.*).

sires only what is best" REALE/CATAN, "veut pour toutes choses ce qu'il y a de meilleur" TRICOT.

It is, however, more likely that the participle expresses the motivation of the principle: τὸ γὰρ δὴ πρῶτον καὶ θειότατον (sc. πράττει) πάντα τὰ ἄριστα (sc. εἶναι) βουλόμενον, the idea of the principle's activity being implied by παρὰ τοῦ πρώτου, 5 b 27. Since the focus of this sentence obviously is on πάντα, the likeliest interpretation appears to be "operates wishing all things to be the best".

Although the diction is reminiscent of Plato's *Timaeus* (βουληθεὶς γὰρ ὁ θεὸς ἀγαθὰ μὲν πάντα 30 A 2; also 29 E 1-3 ἀγαθὸς ἦν ... · τούτου δ' ἐκτὸς ὢν πάντα ὅτι μάλιστα ἐβουλήθη γενέσθαι παραπλήσια ἑαυτῷ.), there is no reason to conclude that Th. is thinking here of Plato rather than of Aristotle, as TRICOT (*ad loc.*) does. The author appears to be deducing consequences from the supposed divinity of the first principle which we were trying to identify in the preceding chapter (cp. ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν 5 a 9-10). In the present context the bringing up of this issue is occasioned by the assumption that the sublunary bodies do not exhibit the supposed ἔφεσις *because they do not show circular movement*. For with respect to the divinity of the principle assumed, the situation is even worse: on the supposition of a principle which really is the best, these entities would be expected to have something even better than κυκλοφορία.

The verb βούλεσθαι does not necessarily imply the notion of a personal god: in both Aristotle and Th. ἡ φύσις occurs as its grammatical subject:

> Arist. *Pol.* 1255 b 1-4 ἀξιοῦσι γάρ, ὥσπερ ἐξ ἀνθρώπου ἄνθρωπον καὶ ἐκ θηρίων γίνεθαι θήριον, οὕτω καὶ ἐξ ἀγαθῶν ἀγαθόν · ἡ δὲ φύσις βούλεται μὲν τοῦτο ποιεῖν πολλάκις, οὐ μέντοι δύναται.
>
> *IA* 708 a 9-11 τό τε τὴν φύσιν μηθὲν ποιεῖν μάτην, ἀλλὰ πάντα πρὸς τὸ ἄριστον ἀποβλέπουσαν ἑκάστῳ τῶν ἐνδεχομένων, ...
>
> *HP* I.10.2 ἡ δὲ φύσις οὐχ ἧττον βούλεται τὸ ὕπτιον, ...

See also *CP* I.21.2 (ἡ δὲ φύσις δῆλον ὡς ἀμφοῖν ἀποδιδόναι βούλεται τὸ σύμμετρον), next note.

On this view, the assertion made here certainly is not "curiously inconsequent", as R-F (*ad loc.*) believe, who point out that Th. has for some time been criticizing Aristotle, and "Aristotle does not ascribe to his first mover a wish for what is best. He describes the life of the first mover as one of pure self-contemplation, in which there is no place for βούλησις". R-F add that Th. may have in mind "not the explicit account of the divine life in *Met.* Λ.9, but occasional passages in which a doctrine of divine providence is suggested", exemplified by passages such as *Cael.* 271 a 33 (ὁ δὲ θεὸς καὶ ἡ φύσις οὐδὲν μάτην ποιοῦσιν), *GC* 336 b 31, *Met.* 984 b 15, 1075 a 15, 19, 1076 a 3-4 (τὰ δὲ ὄντα οὐ βούλεται πολι-

τεύεσθαι κακῶς); L-M (*ad loc.*) add 982 b 32 – 983 a 5. Th., however, seems to be merely working out implications of the idea of a tendency 'towards the best', and in this particular case of that of a first principle which is 'the best': surely such a principle by its very nature cannot be neutral towards the well-being of the rest of the cosmos.

It is, therefore, quite unlikely that we should infer from this passage that Th. himself was sympathetic to a first principle acting as a form of providence; *contra* L-M (*ad loc.*): "[the remark: τὸ γὰρ δὴ ... βουλόμενον] reflète bien plutôt le point de vue de Théophraste (...), qui, en la matière, est plus proche de Platon et de la tradition grecque qu'Aristote."; also Zeller II.2.828 n. 3, Baudry (1931) 223 & n., criticized by Reale 154.

The two testimonies adduced by Zeller (*l.c.*) in support of this thesis,[1] even if it is taken for granted that they are unambiguous, cannot easily be reconciled with the scepticism displayed by Th. in the following (τάχα δὲ ... διαφοράν, 6 a 2-5): cp. Reale, *l.c.* However that may be, *if* Th. did subscribe to the idea of a divine providence, it surely is quite a curious sort of providence, to judge by 11 b 7-12, where he asserts that a hypothetical divine providence probably *would not wish all things to be good*: a principle wishing what is best for the cosmos will take care that there is evil as well as good (see commentary *ad loc.*). The conclusion, therefore, seems justified that Th. does *not* subscribe to the particular point at issue here, i.e. *πάντα* τὰ ἄριστα βουλόμενον.

6 a 2-5 τάχα δὲ τοῦτο μὲν ... διαφοράν.

In a kind of 'dialogue intérieur'[2] Th. qualifies the impression given in the preceding (**τοῦτο**) that one should expect the sublunary entities to receive something better (even) than κυκλοφορία (5 b 26-8) on the supposition that a divine providence wishes all things to be the best (τὸ γὰρ δὴ ... βουλόμενον, 6 a 1-2): this would be "something going too far", "something that is excessive" (**ὑπερβατόν τι**), i.e. a situation transgressing the limits set to the good[3] (**οἷον** seems to indicate, here again,[4] that the term is more at home in a different—possibly social—context), and (accordingly) "not to be looked for" (**ἀζήτητον**); for this use of ζητεῖν compare

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[1] Minuc. Fel. *Octav.* 19.11, Proclus *in Tim.* 31 B (= 242.8-10 FHS&G): (...)· ἢ γὰρ μόνος ἢ μάλιστα Πλάτων τῇ ἀπὸ τοῦ προνοοῦντος αἰτίᾳ κατεχρήσατο [sc. ut ἕνα εἶναι τὸν κόσμον probaret, Diels *Doxogr. Gr.* 493 *ad loc.*], φησὶν ὁ Θεόφραστος, τοῦτό γε καλῶς *αὐτῷ μαρτυρῶν*.

[2] See *ad* τάχα 4 b 16, p. 135 above, and *ad* εἰ μὴ ἄρ(α) κ.τ.λ. 5 b 28 ff., preceding note. Also Introduction, p. 3.

[3] Cp. Heracl. B 94 DK "Ηλιος γὰρ οὐκ ὑπερβήσεται μέτρα· εἰ δὲ μή, Ἐρινύες μιν Δίκης ἐπίκουροι ἐξευρήσουσιν., Plato *Resp.* 373 D 9-10 ἐὰν καὶ ἐκεῖνοι ἀφῶσιν αὑτοὺς ἐπὶ χρημάτων κτῆσιν ἄπειρον, ὑπερβάντες τὸν τῶν ἀναγκαίων ὅρον.

[4] See p. 87-8 above.

CP I.21.2 (for men seeds are not of much value) διὸ καὶ τἀπύρηνα καὶ τὰ μαλακοπύρηνα μάλιστα ζητοῦμεν, καὶ ἐφ' ὅσον δυνάμεθα τοῦτο σπεύδομεν (...)· ἡ δὲ φύσις δῆλον ὡς ἀμφοῖν ἀποδιδόναι βούλεται τὸ σύμμετρον.

—or perhaps "something we should not expect to find", for which compare

HP I.1.3 τάχα δὲ οὐχ ὁμοίως ἅπαντα ζητητέον οὔτε ἐν τοῖς ἄλλοις οὔθ' ὅσα πρὸς τὴν γένεσιν, ...

ὁ τοῦτο λέγων brings out the dialectical nature of this passage by personifying the theoretical position expressed in what precedes (τοῦτο, of course, again referring to εἰ δὲ καὶ ... κυκλοφορίας, 5 b 26-8, which was motivated in τὸ γὰρ δὴ ... βουλόμενον 6 a 1-2). The statement, then, is not more specific than ὁ ... τοιοῦτος λόγος 8 a 27 (or, for that matter, than τὸ δ' ὅλον ... ἀμαθεστάτου 11 a 18-22).

γάρ explains that a transgression of natural boundaries is involved in the idea that the sublunary bodies might have been expected to be in the best condition (i.e., to be endowed with rest, or, as the case may be, with psychic movement),[1] and that, therefore, this idea is not desirable: it amounts to expecting all things to be alike, i.e. (**καί**) to consist in the best things. For the use of 'identifying' ἐν cp. 4 a 17-8 ἐν ποίοις, and for the double plural especially ἐν τοῖς μαθηματικοῖς ... τὰ νοητά (4 a 18-9): someone like this expects to find no things which are not at the same time the best things. Cp. πάντα τὰ ἄριστα (sc. εἶναι) 6 a 1-2.

What is wrong with this conception is hinted at rather than made explicit by **μικράν τιν' ἢ μηδεμίαν ἔχοντα διαφοράν**: a situation in which the individual things which constitute the totality of being are without much differentiation is unlikely, presumably because this situation obviously does not obtain (for an awareness of the significance of διαφοραί see e.g. 4 a 3-6, 7 a 19-22, 8 b 17-20, 9 a 11-8, 10 b 19-20, 10 b 28 – 11 a 1),[2] and because of the conviction, resulting from this observation, that the role of opposites is essential (this may account for the phrase "*little or* no" difference): both good and evil are essential constituents of the cosmic whole (Ch. VII below), and a principle acting according to its wish of extending the best to cover everything would disturb the balance between the good and its opposite ('the bad', evil: 11 b 7-12; cp. preceding note).

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[1] See *ad* κάλλιον ... τι 5 b 27, pp. 237-8.

[2] In L-M the whole of 8 a 8 – 10 a 21 (Chh. VI-VIII) is conceived as a single chapter named "Différences".

II.6 (6 a 5-15): ***With regard to the first heaven itself, the theory of a desire for the best seems to make its rotation accidental. In order to guarantee its continuation, the rotation should be of its essence—unless the desire were innate in it (which is possible). The question might be raised whether the cosmos could exist without the rotation; but this question belongs elsewhere.***

6 a 5-12 τόδε δ' ... ὑπάρχειν.

For ἄν τις ἴσως ἀπορήσειεν see *ad* 5 b 10-1 and 7 b 9-11. Th. finally turns to the first heaven itself, the rotation of which was only implicitly commented upon in the discussion of τὰ κυκλικά in Ch. II.1-3. In Aristotelian terminology the **πρῶτος οὐρανός**, also called οὐρανός *tout court*,[1] is the sphere of the fixed stars.

πρὸς αὐτὸν τὸν πρῶτον οὐρανόν would on its own be understandable with ἀπορήσειεν (it could then be rendered as "with reference to the first heaven itself", R-F' translation of the whole), but we have to take account of ἀναφέρων, which requires an object and a prepositional adjunct. In the most general sense, ἀναφέρειν τι πρός τι appears to mean "to refer something to something (which may be thought of as an ἀρχή in some sense)":[2]

Sens. 64 πλὴν οὐχ ἁπάντων ἀποδίδωσι (sc. Democritus) τὰς μορφάς, ἀλλὰ μᾶλλον τῶν χυλῶν καὶ τῶν χρωμάτων, καὶ τούτων ἀκριβέστερον διορίζει τὰ περὶ τοὺς χυλοὺς ἀναφέρων τὴν φαντασίαν πρὸς ἄνθρωπον.[3]

CP III.2.3 διαιρετέον τάς τε πρωτοτόμους καὶ τὰς ὀψιτόμους, καὶ τὰς βραχυτόμους καὶ τὰς μακροτόμους, καὶ τοῖς ἄλλοις ὡσαύτως, ἀναφέροντας ἀεὶ πρὸς τὸ τέλος ("always relating the distinction of treatment to the end in view", tr. EINARSON/LINK).

HP I.3.6 ἥμερον δὲ καὶ ἄγριον δίκαιον καλεῖν ἀναφέροντα πρός τε ταῦτα (i.e., plants which entirely resist cultivation) καὶ ὅλως πρὸς τὸ ἡμερώτατον —sc. as a standard, which in the latter case at the same time implies a limit.

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[1] ἕνα μὲν οὖν τρόπον οὐρανὸν λέγομεν τὴν οὐσίαν τὴν τῆς ἐσχάτης τοῦ παντὸς περιφορᾶς, ἢ σῶμα φυσικὸν τὸ ἐν τῇ ἐσχάτῃ περιφορᾷ τοῦ παντός, Arist. *Cael.* 278 b 11-21 quoted *ad* 5 b 19; contrast the different use of οὐρανός in 5 b 20, p. 231 above, where also the sequel of Aristotle's text is quoted.
According to Aristotle, only the first heaven is capable of immediately reaching the ultimate principle by a single movement (*Cael.* 292 b 23).

[2] See CLASSEN (1959) 57-8: [ἀναφέρειν bezeichnet] Bezugnahme oder Hinweis auf einen allgemein gültigen Standard oder etwas, das als Autorität (...), Massstab (...), Quelle (...) oder Ursache (...) anerkannt wird. (...) Immerhin wird deutlich, dass überall das Element "zurück" enthalten ist, d.h. näher zur ἀρχή, dem Anfang und Ursprung."

[3] Sc. as the origin: "although he refers the presentation itself to <the sentience of> man", tr. STRATTON; see the preceding ᾗ καὶ φανερὸν ὡς ἡ διάθεσις αἰτία τῆς φαντασίας (*ibid.*).

Hippocr. *VM* IX.3 μέτρον δὲ, οὐδὲ σταθμόν, οὐδὲ ἀριθμόν οὐδένα ἄλλον πρὸς ὃ ἀναφέρων εἴσῃ τὸ ἀκριβές, οὐκ ἂν εὕροις ἀλλ' ἢ τοῦ σώματος τὴν αἴσθησιν.

While **αὐτὸν τὸν** πρῶτον οὐρανόν, therefore, expresses the ontological priority of the first heaven as compared with the other entities (see *ad* 4 b 4), ἀναφέρων seems (added) to convey the primary importance of the first heaven in discussing the question of the alleged tendency towards the best, which is the subject-matter of this chapter: see 5 a 14-5; cp. 6 a 12-3. While putting aside the problems respecting the lower levels of being which are inherent to the theory of a desire, the question is finally brought back to the critical issue of the first heaven.[1]

The function of πρὸς ... ἀναφέρων, then, apparently is to mark the transition to a final vital question (this seems to be the effect of **τόδε** preparing the indirect question), and this may explain the absence of a more 'cumulative' καί; cp. *ad* 5 a 23-4, pp. 179-80 above.

The disjunction **πότερον ... ἢ** considers the consequences of the theory of a desire towards the best for the rotation of the first heaven, by confronting it with a rival theory, according to which the rotation of the first heaven is 'of its essence'. (For τῆς **οὐσίας**, see *Vent.* 2, *CP* I.11.4; also commentary *ad* 8 a 13.) If the rotation is due to some tendency and desire, it will be accidental, that is to say, the rotation is not even guaranteed during the existence of the first heaven. **εἴπερ** indicates that the conclusion of the rotation being accidental holds if and only if the rotation is due to some tendency (**ἔφεσις**: see *ad* 5 a 15 above), and *desire*. **καί** adds the more psychological concept of **ὄρεξις** featuring in the Aristotelian theory.

καὶ ἅμα τῷ πεπαῦσθαι φθείροιτ' ἂν expresses the consequence involved in the first possibility: if the rotation belongs to the essence of the first heaven, it cannot stop without involving the destruction of the first heaven. The remark is of a rather parenthetical nature; this is shown by the syntax too, ὁ πρῶτος οὐρανός being the grammatical subject of φθείροιτ' ἄν, whereas ἡ περιφορά is subject of the sentence in which this parenthetical explanation is embedded.[2] As an addition, though, it is effective in so far as the certainty of 'if first heaven, then rotation, and if no rotation, then no first heaven' makes

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[1] Cp. L-M "en faisant remonter [l'argument] au premier ciel lui-même".

[2] Cp. the manuscript reading φθείροι τ' mentioned in R-F' *app. crit.*; if it really *is* a variant reading, it is absent in L-M. Cp. φθείροι ἂν τὸν οὐρανόν in 6 a 14 (where, incidentally, there is an—unlikely—variant reading φθείροιτ' ἄν).

a marked contrast with the contingency of an accidental rotation by virtue of a desire.

The main issue, then, concerns the choice between the rotation being either (a) an inalienable property, or (b) due to a desire—the latter possibility implying that there is no necessity or guarantee at all for this desire, and thus neither for the consequent rotatation. It may seem that Th. is confronting Aristotle with his own criticism of Plato's theory in the *Timaeus*:

> Arist. *DA* 407 b 5-9 ἄδηλος δὲ καὶ τοῦ κύκλῳ φέρεσθαι τὸν οὐρανὸν ἡ αἰτία· οὔτε γὰρ τῆς ψυχῆς ἡ οὐσία αἰτία τοῦ κύκλῳ φέρεσθαι, ἀλλὰ κατὰ συμβεβηκὸς οὕτω κινεῖται, οὔτε τὸ σῶμα αἴτιον, ἀλλ' ἡ ψυχὴ μᾶλλον ἐκείνῳ.

Th., however, adds the comment that, after all, there *may* be a way out for the Aristotelian theory: for **εἰ μὴ ἄρα**, see *ad* 4 b 10. As contrasted with 5 b 28 above, the 'afterthought' here constitutes a significant contribution to the argument. If feeling desire (**τὸ ὀρέγεσθαι**, the activity rather than, with abstraction of the subject, the phenomenon of ἡ ὄρεξις) would be *innate in* the first heaven (**σύμφυτον αὐτῷ**), the situation would be less unstable (and, one might add, the theory of a desire would approach the other possibility of the rotation being an inalienable characteristic).

How open Th. is in entertaining the possibility of amending the theory of desire, appears from the fact that he adds that nothing prevents certain entities of such a nature (**τοιαῦτ' ἄττα**: i.e. of such a nature as to exhibit an innate desire) among "what is there", "the things which are" (**τῶν ὄντων**)[1] from existing. The remark may be understood as an analogical argument in a nutshell, apparently based on a conception relative to animals (or human beings). Judging by the wording (ὄντων, ὑπάρχειν), Th. seems, at any rate, to have in mind *bearers of* such a desire rather than the abstract phenomenon of innate desire.

The use of σύμφυτον in this context[2] recalls the explanation of animal movement due to desire in terms of τὸ σύμφυτον πνεῦμα put forward by Aristotle in *MA* 703 a 4-10:

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[1] Cp. 8 a 9, 12 a 2.

[2] It may be noted that the use of σύμφυτος here does not demonstrate the distinction between σύμφυτος and ἔμφυτος reported to be Theophrastean in 424.11-4 FHS&G (= Galenus *Simpl. medic.* 4.7) καὶ μὴν ὅτι γε τῷ θερμῷ πέπτονται πάντες (sc. οἱ καρποὶ) δῆλον, ὅτι δὲ διττόν ἐστι τοῦτο, τὸ μὲν ἴδιον ἔμφυτον ἑκάστου, τὸ δ' ἔξωθεν μὲν ἀπὸ τοῦ ἡλίου, σύμφυτον δὲ καὶ οἰκεῖον αὐτοῖς, εἴπερ μεμνήμεθα τῶν ὑποκειμένων ἡμῖν ἀεὶ στοιχείων ("if we remember the basic principles which we continually presuppose" tr. FHS&G), ἴσμεν δήπου σαφῶς. Cp. also 320B.1-4 FHS&G (= Them. *In De An.* 3.5): οὕτω δὲ καὶ Θεόφραστος, ἐν οἷς ἐξετάζει τὰ 'Αριστοτέλους περὶ τοῦ ποιητικοῦ νοῦ, ἀπορεῖ· "εἰ μὲν γὰρ ὡς ἕξις", φησίν, "ἡ δύναμις, ἐκείνῳ *εἰ μὲν σύμφυτος, αἰεὶ καὶ εὐθὺς ἐχρῆν*· εἰ δ' ὕστερον, μετὰ τίνος καὶ πῶς ἡ γένεσις; ...".

κατὰ μὲν οὖν τὸν λόγον τὸν λέγοντα τὴν αἰτίαν τῆς κινήσεως ἐστὶν ἡ ὄρεξις τὸ μέσον, ὃ κινεῖ κινούμενον· ἐν δὲ τοῖς ἐμψύχοις σώμασι δεῖ τι εἶναι σῶμα τοιοῦτον. τὸ μὲν οὖν κινούμενον μὲν μὴ πεφυκὸς δὲ κινεῖν δύναται πάσχειν κατ' ἀλλοτρίαν δύναμιν· τὸ δὲ κινοῦν ἀναγκαῖον ἔχειν τινὰ δύναμιν καὶ ἰσχύν. πάντα δὲ φαίνεται τὰ ζῷα καὶ ἔχοντα πνεῦμα σύμφυτον καὶ ἰσχύοντα τούτῳ.

"[The theory of *pneuma*] clarifies the account of motion towards an object of desire by making it clear that desire, like *aisthèsis*,[1] is a functional state of matter and not some Cartesian incorporeal agent, quite literally using the body as a tool to effect change in the world. It supplements the physiological analysis by adding to the usual four elements, with their limited repertory of natural motions, a more versatile constituent that helps to guarantee the body's organic unity.", NUSSBAUM (1978) 146.

Viewed in this perspective, Th.' suggestion in amendment of the hypothesis of a desire on the part of the first heaven, that feeling desire be innate in it and therefore not incidental, (1) on the one hand corroborates the analogy between (a) the σύμφυτον πνεῦμα in animals and (b) the fifth element which constitutes the matter of the heavenly bodies,[2] and (2) on the other hand exposes the idea of an innate *desire* as superfluous: there still is the possibility that the rotation itself is 'innate' in the first heaven (whether or not as the natural motion of the fifth element).[3]

Since Th. is making this suggestion merely as a possible way of upholding the theory of desire, which is only one of two options (and not the preferred one, to judge from 10 a 9-19), this passage by itself does not tell us whether Th. rejected the notion of the fifth element.

The fact is that, if an innate pneuma is supposed to constitute the physiological basis of desire, the risk of the rotation of the first heaven coming to a halt is equal to that in the alternative case: if feeling desire is innate in the first heaven, the first heaven will be destroyed together with its desire and with the consequent rotation. Cp. the role of the "innate moist & heat" (ἕν τι

Ign. 66 οὐδὲν γὰρ διαφέρειν σύμφυτον καὶ ἐπακτὸν ἔξωθεν ἔχειν τὸ θερμόν. ("For it makes no difference whether a substance has natural or adventitious heat.", tr. COUTANT) agrees with this picture too.

[1] For the idea that αἴσθησις is innate (σύμφυτος) in living beings, see Plato *Tim.* 42 A 5-6 (of human souls; but also of ἔρως (6-7), i.e. of some kind of desire as well); Arist. *An. Pr.* 99 b 35 (ἔχει γὰρ (sc. all animals) δύναμιν σύμφυτον κριτικήν, ἣν καλοῦσιν αἴσθησιν).

[2] See Arist. *GA* 736 b 35 – 737 a 1 τὸ ἐμπεριλαμβανόμενον ἐν τῷ σπέρματι καὶ ἐν τῷ ἀφρώδει πνεῦμα καὶ ἡ ἐν τῷ πνεύματι φύσις, ἀνάλογον οὖσα τῷ τῶν ἄστρων στοιχείῳ; see NUSSBAUM (1978) 159-64.

[3] For the question whether Th. adopted the concept of αἰθήρ as the fifth element see e.g. STEINMETZ (1964) 163-7.

μὲν οὖν τοῦτο τὸ μέρος (ἡ ὑγρότης) καὶ τὸ τούτῳ συνηρτημένον θερμόν. *HP* I.2.5) which Th. ascribes to plants:

> *HP* I.2.4 πρῶτα δέ ἐστι τὸ ὑγρὸν καὶ θερμόν· ἅπαν γὰρ φυτὸν ἔχει τινὰ ὑγρότητα καὶ θερμότητα σύμφυτον, ὥσπερ καὶ ζῷον, ὧν ὑπολειπόντων γίνεται γῆρας καὶ φθίσις, τελείως δὲ ὑπολιπόντων θάνατος καὶ αὔανσις. Also
> *CP* II.6.2 εἴπερ ἀφαιρεῖται (sc. ὑπερβολή τις τοῦ ψυχροῦ) τὴν τοῦ θερμοῦ δύναμιν, ἀφαιρεῖται γὰρ τὴν ζωήν· ...

Cp. also the role of τὸ σύμφυτον πνεῦμα which pervades the whole body (δι' ὅλου) in Ps.-Arist *Spir.*, e.g. 482 b 34, cp. 481 b 20; 484 a 7 ff. ἔτι πάντων τῶν ἐχόντων θερμότητα σύμφυτόν πως ἡ διαμονή, ... ("permanence is in a sense natural for all things which have warmth", *RevOT*).

Th. will return to the first possibility in a somewhat wider perspective in 6 a 12-5: see next note.

6 a 12-5 ἴσως δ' ἂν εἴη ... ὥσπερ ἑτέρων λόγων.

Finally Th. raises the question of the status of the movement itself (**αὐτῆς τῆς** κινήσεως): the rotation of the heaven—presumably not necessarily the 'first' one; the less physical point of view respecting the plurality & hierarchy of moved movers seems to recede into the background here. The movement is more fundamental than its supposed explanation in terms of a desire, as is also shown by **ἀφελόντα τὴν ὄρεξιν** ("taking away the desire"): ἀφαιρεῖν "de abstractione logica".[1] This more fundamental question takes as its starting-point the characteristic common to both alternatives mentioned above (the latter, that is, *including* Th.' amendment of an *innate* desire: see preceding note): if the essential or possibly 'innate' characteristic were taken away, would this involve the destruction of the cosmos as a whole? (It is impossible to translate **τὸν οὐρανόν** here: it apparently refers to the first heaven the destruction of which, however, implies the destruction of the whole: see *ad* 5 b 20 above.) **ἀφαιρεθεῖσα** might possibly refer to mentally peeling off *the notion* of οὐρανός;[2] however, the phrase ἅμα τῷ πεπαῦσθαι φθείροιτ' ἂν in 6 a 8-9 and the passages from Plato and Aristotle to be quoted below, make it more likely that here too the issue is whether the rotation, if 'removed', would take along in its destruction the cosmos as a whole.[3] Of

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[1] Bonitz 126 b 4 s.v.

[2] "[ἀφαιρεῖν] est utilisé pour désigner l'acte de l'intelligence qui cherche à discerner, dans une définition, entre le superflu et le propre; l'intelligence alors enlève tel ou tel attribut ajouté, et considère si ce qui reste de la notion exprime encore la substance.", Philippe (1948) 466.

[3] Cp. ὅσοι τὸν οὐρανὸν ἀΐδιον ὑπολαμβάνουσιν 9 b 24-5, and esp. VIII.7, 10 a 9-21, see pp. 477 ff. below.

course the possibility considered here at the same time still involves a mental exercise. Compare

FHS&G 146.5-6 (ὁ Θεόφραστος ... ἀπορεῖ) ὅτι τὰ ἐν τόπῳ ὄντα μηδὲν αὐτὰ μετακινηθέντα, ἐὰν ἀφαιρεθῇ τὰ περιέχοντα αὐτά, οὐκέτι ἔσται ἐν τόπῳ.

The agent implied by the use of ἀφαιρεῖν/ἀφαιρεῖσθαι need not necessarily be a being endowed with consciousness; it may be no more than a natural (or 'chemical') process: see ὑπερβολή τις τοῦ ψυχροῦ in *CP* II.6.2, preceding note.

The question is a familiar one in Academic-Peripatetic discussions, apparently as a legacy of earlier philosophers, see Arist. *Met.* 1050 b 22-4 διὸ ἀεὶ ἐνεργεῖ ἥλιος καὶ ἄστρα καὶ ὅλος ὁ οὐρανός, καὶ οὐ φοβερὸν μή ποτε στῇ, ὃ φοβοῦνται οἱ περὶ φύσεως.[1] Compare

Plato *Tht.* 153 C 9 – D 5 (Socrates' allegorical interpretation of Zeus' golden chain:) ... προσβιβάζω τὴν χρυσῆν σειρὰν ὡς οὐδὲν ἄλλο ἢ τὸν ἥλιον Ὅμηρος λέγει, καὶ δηλοῖ ὅτι ἕως μὲν ἂν ἡ περιφορὰ ᾖ κινουμένη καὶ ὁ ἥλιος, πάντα ἔστι καὶ σῴζεται τὰ ἐν θεοῖς τε καὶ ἀνθρώποις, εἰ δὲ σταίη τοῦτο ὥσπερ δεθέν, πάντα χρήματ' ἂν διαφθαρείη καὶ γένοιτ' ἂν τὸ λεγόμενον ἄνω κάτω πάντα;

—Socrates is referring to *Il.* 8.19, the context of the line quoted by Th. in 5 b 17 above: see pp. 226-7.

According to Plato's own belief, the permanence of the universe is guaranteed by the principle of the unmoved mover:

Plato *Phaedr.* 245 D 7 – E 2 τοῦτο δὲ (sc. τὸ αὐτὸ αὑτὸ κινοῦν) οὔτ' ἀπόλλυσθαι οὔτε γίγνεσθαι δυνατόν, ἢ πάντα τε οὐρανὸν πᾶσάν τε γῆν εἰς ἓν συμπεσοῦσαν στῆναι καὶ μήποτε αὖθις ἔχειν ὅθεν κινηθέντα γενήσεται.

Aristotle, in his turn, after having referred to the same passage of Homer, offers his own solution:

Arist. *MA* 700 a 4-6 τὸ γὰρ ὅλως ἀκίνητον ὑπ' οὐδενὸς ἐνδέχεται κινηθῆναι. ὅθεν λύεται καὶ ἡ πάλαι λεχθεῖσα ἀπορία, πότερον ἐνδέχεται ἢ οὐκ ἐνδέχεται διαλυθῆναι τὴν τοῦ οὐρανοῦ σύστασιν, εἰ ἐξ ἀκινήτου ἤρτηται ἀρχῆς.

Here again the conviction seems to be prior to proving it: *ibid.* 699 b 21-2 τὸν δ' οὐρανὸν ἄφθαρτον εἶναι καὶ ἀδιάλυτον οἰόμεθα μὲν ἐξ ἀνάγκης, and

Phys. 259 b 22-6 ὥστ' εἴπερ ἀνάγκη συνεχῶς εἶναι κίνησιν, εἶναί τι δεῖ τὸ πρῶτον κινοῦν ἀκίνητον καὶ κατὰ συμβεβηκός, *εἰ μέλλει*, (καθάπερ εἴπομεν) *ἔσεσθαι* ἐν τοῖς οὖσιν ἄπαυστός τις καὶ ἀθάνατος κίνησις, *καὶ μενεῖν* τὸ ὂν αὐτὸ ἐν αὑτῷ καὶ ἐν τῷ αὐτῷ· ... (see also p. 143).

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[1] According to Alexander, Aristotle was thinking of Empedocles in particular: see Ross *ad loc.*

Th. adds that this question is one that belongs elsewhere ('modal' use of the genitive): in view of the plural, **ἑτέρων λόγων** probably refers to specific discussions;[1] e.g.

> Arist. *GC* 318 a 3-4 περὶ μὲν γὰρ ἐκείνης εἴρηται πρότερον ἐν τοῖς περὶ κινήσεως λόγοις, ὅτι ...[2]
> 317 b 13-4 περὶ μὲν οὖν τούτων ἐν ἄλλοις τε διηπόρηται καὶ διώρισται τοῖς λόγοις ἐπὶ πλεῖον, ...[3]

rather than to a different type of discussion: e.g. *HP* I.10.3 ἀλλὰ περὶ μὲν τροφῆς διὰ τίνων ἕτερος λόγος,[4] similarly ἄλλος λόγος, *CP* I.16.6; also *HP* IX.17.4 ἀλλὰ γὰρ ταῦτα μὲν ἑτέρας ἄν τινος εἴη θεωρίας. The singular, however, may equally well have a specific reference: e.g. *CP* II.5.2 ἀλλὰ τούτων μὲν πέρι λόγος ἕτερος,[5] cp. also <u>Lap.</u> 38 ταῦτα μὲν οὖν ἄλλης σκέψεως, which might refer to a lost work by Th. περὶ τῶν (ἀπο)λιθουμένων: see EICHHOLZ *ad loc.*

The plural (which, all things considered, seems to be more apt for a 'concrete' reference) also in e.g.

> Arist. *DA* 407 b 12-3 ἐπεὶ δ' ἐστὶν ἡ τοιαύτη σκέψις (sc. concerning the 'best' kind of movement) ἑτέρων λόγων οἰκειοτέρα, ταύτην μὲν ἀφῶμεν τὸ νῦν, and in a more specific context
> *PA* 655 b 23-7 ἔτι δὲ περὶ γονῆς καὶ γάλακτος ἀπελίπομεν ἐν τῇ περὶ τῶν ὑγρῶν καὶ ὁμοιομερῶν θεωρίᾳ· *τοῖς γὰρ περὶ γενέσεως λόγοις ἁρμόττουσαν ἔχει τὴν σκέψιν*· τὸ μὲν γὰρ αὐτῶν ἀρχὴ τὸ δὲ τροφὴ τῶν γινομένων ἐστίν.

The reference may be to Ch. VIII.7, but more likely perhaps to a different treatise: the titles of Th.' works include a περὶ κινήσεως (137.2 FHS&G), and the discussion περὶ ἀφθαρσίας κόσμου mentioned by Philo (184 FHS&G) might refer to a part of the φυσικῶν δόξαι, or rather of a treatise πρὸς τοὺς φυσικούς (FHS&G 137.8; see REGENBOGEN 1539).

ὥσπερ seems to imply that this question is dismissed purely in consequence of this particular argument,[6] and in itself may be taken to reveal a certain interest in the subject.

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[1] "λόγοι saepe usurpatur, ubi ad alias eiusdem libri partes vel ad alios libros lectores relegantur", BONITZ 433 b 30-2 s.v. λόγος I.6.

[2] Referring to *Phys.* 258 b 10 ff. (FORSTER *ad loc.*).

[3] Referring to *Phys.* I.6-9 (FORSTER *ad loc.*).

[3] "c'est une autre question", tr. AMIGUES; cp. also *HP* IV.13.2, "une autre histoire".

[5] "the discussion of these matters belongs elsewhere" tr. EINARSON/LINK, who take it to refer to *CP* VI.10.2.

[6] Cp. e.g. ὥσπερ παρὰ φύσιν, *CP* I.16.2, p. 172 above; ὥσπερ ἐπίθετος, 307A.3 FHS&G, p. 181 above. Also *ad* 4 a 11-2 (p. 91).

μέν implies a contrast with (actual or hypothetical) relevant issues, and is answered by δ'οὖν at te beginning of the next paragraph.[1] καί[2] seems to single out this question from other, irrelevant issues, not made explicit here (unless 5 a 21-3 is still in the mind of the author).[3] Similarly—though the other way around in substance—καὶ ταῦτα μὲν ἐνταῦθά που ζητεῖ τὴν σκέψιν, 7 b 5-6.

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[1] In this kind of text μέν, like μὲν οὖν, seems to mark the rounding off of an argument or paragraph; it is unnecessary at any rate, to start the new alinea with καὶ τοῦτο μὲν κ.τ.λ., as L-M do. Cp. Introduction, pp. 5-6.

[2] καί is not the most obvious particle to be used in combination with μέν in this context: see the use of ἀλλὰ ... μέν or μὲν οὖν in the passages quoted *ad* ἑτέρων λόγων above. See however 7 b 5, below.

[3] Which is not to say that here too Th. feels that he is passing from metaphysics to astronomy, as R-F (*ad loc.*) have it.

CHAPTER THREE

III.1 (6 a 15-22): *Whichever the principle (or principles) assumed, one might be expected to go on to give an account of the lower levels of being as well.*

6 a 15-8 ἀπὸ δ' οὖν ... παύεσθαι·

ἅς J²; ἄρ' PJA; 'ἄρ' C; ὅς L; ἀρ⟨χῶν⟩ Wimmer.
ἄν τις ἄρα USENER (1861) 269 n.

With **δ' οὖν** (see *ad* 4 a 13) Th. returns from the problems concerning the theory of desire discussed in the preceding chapter to the point where he reached a provisional conclusion about the nature of the first principle, at the end of Ch. I. As may be inferred from the use of ταύτης and τούτων—rather than a less definite τοιαύτης, τοιούτων—the conclusion arrived at in that chapter now serves as a point of departure; the issue is what may be expected next from someone having this (or any other: see below) conception of noetic principles. Th. will return to problems concerning this particular conception in Ch. V.

It is worth noting that here again the less probable hypothesis of a plurality of principles is taken into account (**ταύτης ἢ τούτων**: see τίς ... (καὶ τίνες, εἰ πλείους) 4 b 11), and this time not in a parenthesis but with **τῶν ἀρχῶν** itself in the plural: now that we have some idea, however provisional, of the characteristics of a principle, the issue is how one may be expected to *proceed from* the principle(s) assumed.

The present use of the plural, a form of cautiousness which seems characteristic of the author, at the same time helps to extend the statement of this particular case to one of a general nature: what one should do now, after having reached this particular conclusion about the nature of the noetic principles, is just what one should do starting from *any* principles.—This at least is what the parenthesis **τάχα δὲ ... τίθηται** (significantly placed after the expectation has been announced, but before it is made explicit) obviously means to convey, although the text is uncertain: see R-F and L-M, *app. crit.* Both these editions read τάχα δὲ καὶ ἀπὸ τῶν ἄλλων ἄρ', ἄν τις τιθῆται (with PJA and, apparently, C: see above). The problem is not so much that

the position of ἄρα would be somewhat surprising,[1] but rather that the combination with τάχα δέ seems to be a little awkward, in so far as it makes ἄρα adhere closely to τῶν ἄλλων. With τῶν ἄλλων the adverbial use of ἄρα would express a lively interest in the possibility that there would appear to be other principles; this (i) does not seem to accord very well with τάχα δέ, which merely introduces, with some circumspection, the claim that this would apply generally, and (ii) makes the sequel (ἐ)άν τις τιθῆται (with a prospective use of the subjunctive: "si quelqu'un en pose" L-M) seem rather lame. (Cp. R-F *ad loc.*: "ἄρ' is rather lacking in point".)

With some hesitation I therefore adopt the correction by the second hand in J, **ἃς** ἄν τις τίθηται (end XIII, or XIV A.D.: L-M [58]), which R-F (*ad loc.*) too suspect to be the "true reading". The plain relative (as opposed to an indefinite) chimes in with the distributive use of the subjunctive: the requirement holds for any other principles one may assume.[2]

One might expect (**ἀξιώσειεν ἄν τις**) that someone starting from these—or any—principles (i.e., a philosopher: the one who found them) would go on at once to account for the subsequent entities. ἀξιοῦν, as appears from the case of προελθόντα in 6 a 18, expresses an expectation with regard to someone else (therefore not "think fit", "deign to", as e.g. in Soph. *OR* 1413 ἴτ', ἀξιώσατ' ἀνδρὸς ἀθλίου θιγεῖν, Aesch. *Pers.* 335-6 ὥστ' ἀξιῶσαι Περσικῷ σρτατεύματι / μάχην συνάψαι);[3] compare

> Arist. *Poet.* 1456 a 5-7 γεγονότων γὰρ καθ' ἕκαστον μέρος ἀγαθῶν ποιητῶν, ἑκάστου τοῦ ἰδίου ἀγαθοῦ ἀξιοῦσι τὸν ἕνα ὑπερβάλλειν ("the critics now expect the one man to surpass that which was the strong point of each one of his predecessors", *RevOT*).

See also *ad* τοῦτο γὰρ τελέου καὶ φρονοῦντος, next note.

τὰ ἐφεξῆς, here apparently the levels of being (or entities) coming immediately after the first principles (cp. τὰ μετὰ τὰς ἀρχάς, 6 b 19), i.e. the things of nature.[4] The term is quite general, and does not in itself provide informa-

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[1] For ἄρα appearing later in the sentence L-M (*ad loc.*) refer to DENNISTON 41.

[2] "Der Begriff der Unbestimmtheit, welcher durch ὅς *c. conj.* ausgedrückt wird, ist verschieden von dem, der durch die unbestimmten Relative, wie: ὅστις, ὁπόσος u.s.w., mit dem Indikative (...) bezeichnet wird. In dem letzteren Falle wird die Unbestimmtheit immer auf den Gegenstand bezogen, in dem ersteren aber liegt sie im Prädikate." K-G II.2.426, Anm. 2. E.g. Hdt. 1.29 ὁρκίοισι γὰρ μεγάλοισι κατείχοντο (sc. Ἀθηναῖοι) δέκα ἔτεα χρήσεσθαι νόμοισι, τοὺς ἄν σφι Σόλων θῆται; Xen. *Cyr.* 1.1.2 ἄνθρωποι ἐπ' οὐδένας μᾶλλον συνίστανται ἢ ἐπὶ τούτους, οὓς ἂν αἴσθωνται ἄρχειν αὐτῶν ἐπιχειροῦντας.

[3] *Contra* L-M "on pourrait juger bon de rendre compte ... et de ne pas s'interrompre ...".

[4] For ἀρχή—and thus what follows, too—as a *relative* concept see 9 a 13-4 αὐτῶν τε τούτων (sc. τῶν κινητῶν καὶ ὑπὸ τὴν φύσιν) τὰ ἐν ἀρχῇ καὶ ⟨τὰ⟩ ἑπόμενα.

tion about the mode of 'successiveness' (e.g. ἁφή, συνέχεια, σύμφυσις) involved: see Arist. *Phys.* 226 b 18 ff.; ἐφεξῆς simply indicates that there is not, between two items, any other item which is of the same kind as they are (ὧν μηδὲν μεταξὺ συγγενές *Phys.* 231 a 23). A notion of continuity is conveyed by εὐθύς rather than by ἐφεξῆς: see below.

The term is used of winds (*Vent.* 52), of time (*CP* I.11.7), of an event following upon a cause (ἀπὸ μιᾶς ἀρχῆς ἀνάλογον ἔχοντα τὸ ἐφεξῆς, *Vent.* 59), of successive steps in memory (Plato *Meno* 82 E 12), of a sequence of genera (*CP* I.11.6), issues (*HP* I.14.5 τοῦτο γὰρ ὥσπερ ἐφεξῆς τοῖς εἰρημένοις ἐστίν),[1] fields of learning (Ps.-Plato *Epin.* 990 D 1). For the present use cp. especially Ps.-Arist. *De Mundo* 397 b 27-30 μάλιστα δέ πως αὐτοῦ τῆς δυνάμεως ἀπολαύει τὸ πλησίον αὐτοῦ σῶμα, καὶ ἔπειτα τὸ μετ' ἐκεῖνο, καὶ ἐφεξῆς οὕτως ἄχρι τῶν καθ' ἡμᾶς τόπων, quoted *ad* 5 b 13, p. 225 above.

For **ἀποδιδόναι** see 4 b 17, pp. 135-6. For the combination with **εὐθύς**, cp. *CP* II.4.12 ὁμοίως δὲ καὶ οἱ τὴν μελάγγεων ἐπαινοῦντες, ὥσπερ Λεωφάνης· εὐθὺς γὰρ ἀποδιδόναι πειρᾶται τὰς αἰτίας, ὅτι ... The adverb indicates that there should be no break (whether temporal or with regard to the activity) between finding the first principle(s) and accounting for the entities at the lower levels of being, and thus seems to convey the idea of (ontological) continuity between the highest level of being and the lower ones: cp. 4 a 9 – b 16 above with commentary. For the parallelism between ontological and epistemological continuity cp.

> Arist. *Met.* 1004 a 2-9 καὶ τοσαῦτα μέρη φιλοσοφίας ἔστιν ὅσαιπερ αἱ οὐσίαι· ὥστε ἀναγκαῖον εἶναί τινα πρώτην καὶ ἐχομένην αὐτῶν. ὑπάρχει γὰρ *εὐθὺς* γένη ἔχον τὸ ὄν·[2] *διὸ καὶ αἱ ἐπιστῆμαι ἀκολουθήσουσι τούτοις*. ἔστι γὰρ ὁ φιλόσοφος ὥσπερ ὁ μαθηματικὸς λεγόμενος· καὶ γὰρ αὕτη ἔχει μέρη, καὶ πρώτη τις καὶ δευτέρα ἔστιν ἐπιστήμη καὶ ἄλλαι *ἐφεξῆς* ἐν τοῖς μαθήμασιν.

One might expect, then, that a philosopher, having identified the first principle(s), should proceed to the lower levels of being, and that he should not stop before having gone through the totality of being.[3] Cp., with regard to a comprehensive treatment of an ethical concept, Arist. *Pol.* 1280 a 9-11 πάντες γὰρ ἅπτονται δικαίου τινός, *ἀλλὰ μέχρι τινὸς προέρχονται*, καὶ λέγου-

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[1] Cp. also *CP* I.11.6, where the successiveness of genera and the successiveness of points in the discussion seem to converge.

[2] "For being falls immediately into genera", *RevOT*.

[3] *Contra* SENN (1933) 126: "Die theoretisch-deduktive Schlussfassung, die sich für die Untersuchung metaphysischer Fragen eignet, wies Theophrast endgültig der Philosophie und Metaphysik zu. Dadurch grenzte er das Gebiet dieser Disziplinen gegen dasjenige der Naturforschung prinzipiell ab und teilte jedem dieser Forschungsgebiete diejenige Methode zu, die ihm allein adaequat ist."

σιν οὐ πᾶν τὸ κυρίως δίκαιον.[1] **μέχρι του** (see also μέχρι τινός 6 a 23, 6 b 10; for the form of the pronoun, cp. τὸ ἕνεκά του (e.g. 7 a 21), but τὸ τινὸς χάριν, 11 b 15):[2] "up to some point", sc. on the road to explanation: both the local and the temporal uses contribute to this application to a systematic progression.

In our passage the idea is that all entities deserve explanation, even the most imperfect ingredients of the physical world; differences in the completeness of the explanations provided by different philosophers are discussed also in *Sens.* (see esp. 59-60, p. 260 below).

The more theoretical issue of the limits to be set to explanation as such (μέχρι πόσου καὶ τίνων ζητητέον αἰτίας, 9 b 2-3) is discussed in Ch. VIII. There we learn that in descending from the noetic first principles one should not try to find an explanation even for the elementary, 'basic' principles, the ultimate constituents of nature; but this is not at issue here.

6 a 19-22 τοῦτο γὰρ ... τυγχάνει.

The expectations with regard to the intellectual attitude of philosophers when they have identified the principle(s), expressed in the preceding sentence in ἀξιώσειεν ἄν τις, is now illustrated (**γάρ**) by the example of Eurytus, whose explanatory activities (for τοῦτο ... ὅπερ ... ποιεῖν ... · λέγειν γὰρ ... see below) show a comprehensiveness which does indeed answer to these expectations. At the same time, **τελέου καὶ φρονοῦντος** specifies the character of these expectations : they are no more than what may be reasonably expected from a 'complete & sane' (i.e. sensible grown-up) person.

For the use of τέλε(ι)ος[3] for an adult cp. Ps.-Arist. *MM* 1185 a 3 οὐ γὰρ ἔσται ἐν παιδί (sc. ἡ εὐδαιμονία, which is τέλειον ἀγαθὸν καὶ τέλος), ἀλλ' ἐν ἀνδρί· οὗτος γὰρ τέλειος, and Arist. *Pol.* 1259 b 1-4, where ὁ πρεσβύτερος καὶ τέλειος is said to be ἡγεμονικώτερος than ὁ νεώτερος καὶ ἀτελής. A passage like Arist. *Meteor.* 339 b 33, where a παιδικὴ δόξα is characterized as λίαν ἁπλοῦν, suggests that the accomplishment of a grown-up man consists, amongst other things, in an awareness or capability of complexity.

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[1] Cp. also the τόπος that one should examine a problem starting from τὰ πρῶτα, and—unless clarity has been gained in the process—should continue the process of division μέχρι τῶν ἀτόμων, Arist. *Top.* 109 b 16 ff., quoted *ad* 9 a 3.

[2] μέχρι του also in Arist. *GC* 316 b 32; in both Aristotle (see BONITZ 763 a 20-25 s.v.) and Th. τινος seems to predominate. According to LSJ (s.v.), του is rare after 300 B.C. (it was revived by the Atticists).

[3] The present treatise invariably has τέλεος (although in 7 a 9 A reads τέλειον: see L-M *app. crit. ad loc.*); *HP* I.1.3 τελείας. Cp. τελέως *HP* III.7.1, IV.2.2, 7.2, but τελείως II.3.3; τελεοῦν *HP* I.14.1, τελειοῦν III.4.6 (text AMIGUES.)

The term is used also in a more strictly normative sense, distinguishing between more and less perfect members of a class: cp. the second use of τέλειον distinguished in

Arist. *Met.* 1021 b 15-7 (τέλειον λέγεται) τὸ κατ' ἀρετὴν καὶ τὸ εὖ μὴ ἔχον ὑπερβολὴν πρὸς τὸ γένος,[1] οἷον τέλειος ἰατρὸς καὶ τέλειος αὐλητὴς ὅταν κατὰ τὸ εἶδος τῆς οἰκείας ἀρετῆς μηθὲν ἐλλείπωσιν ...

However, in the present context τέλεος apparently rather has the connotation of *normality* (cp. ἀξιώσειεν ἄν τις, above). The addition of καὶ φρονοῦντος seems to specify the intended interpretation of τέλεος: being φρονῶν is the normal condition of an adult (see e.g. Aesch. *Choeph.* 753 τὸ μὴ φρονοῦν, "of an infant" LSJ s.v.; ἡ φρονοῦσα καὶ πρεσβυτέρα ἡλικία Aeschin. 1.139); it is among the restrictions imposed on purchases ("mentally competent", FHS&G 650.40).

Trying to extend to the maximum one's understanding of the world, then, is simply the task of the man (specifically, the philosopher) who fully realizes his natural potential. This noticeably implies rather a harsh verdict on all those philosophers, to be discussed presently, who have failed to do so.

The Pythagorean Eurytus[2] apparently used to illustrate his theory that physical objects are determined by monads, in a creative way. Aristotle refers to his practice too:

Arist. *Met.* 1092 b 9-13 (numbers are the causes of substances and of being, in one sense) οἷον αἱ στιγμαὶ τῶν μεγεθῶν, καὶ ὡς Εὔρυτος ἔταττε τίς ἀριθμὸς τίνος, οἷον ὁδὶ μὲν ἀνθρώπου ὁδὶ δὲ ἵππου, ὥσπερ οἱ τοὺς ἀριθμοὺς ἄγοντες εἰς τὰ σχήματα τρίγωνον καὶ τετράγωνον, οὕτως ἀφομοιῶν ταῖς ψήφοις τὰς μορφὰς τῶν ⟨ζῴων καὶ⟩[3] φυτῶν.

The most detailed report of this procedure is in Ps.-Alexander's commentary on Aristotle's *Met.* 14, 1092 b 8 (826.35 – 827.26 Hayduck):[4] Eurytus drew the outline of an object on a wall covered with lime, and filled in these contours with pebbles (ψῆφοι). In a society in which pebbles are used as instruments for calculation,[5] this application of pebbles to determining numerical

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[1] "that which in respect of excellence and goodness cannot be excelled in its kind", *RevOT.*

[2] For testimonies, see R-F *ad loc.*

[3] Inser. Christ: see DK I.420 *ad loc.* That the suppletion is unnecessary is argued by Bélis (1983) 65-70.

[4] Apparently by Michael of Ephesus (XI-XII A.D.): see Sorabji & Sharples *ap.* Dooley (1989) 3. The value of this testimony is questioned by Burkert (1962) 35 n. 124; see also Laks (1988) 252 n. 48.

[5] See Bélis (1983) 71-2 n. 6.

quantity may not have required exceptional inventiveness. It seems, however, that Eurytus used the pebbles for making qualitative distinctions as well, since according to Ps.-Alexander he applied pebbles of different (presumably natural) colours,[1] using some for the outlines of the head, others for the hands, and so on.[2] (Cp., perhaps, also **διατιθέντα**, "arrange (each) in their several places", LSJ s.v.) This somewhat curious practice for a number theorist may merely have had the purpose of captivating the audience;[3] in any case Eurytus must have been an enthousiastic teacher, who did not tire of making explicit the drift of his art (**λέγειν**, absent in Aristotle, is prominent in Ps.-Alexander's report, too: 826.35, 827.17), pointing out the different items with a marked vividness: **ὅδε μὲν ..., ὅδε δὲ ..., ὅδε δ(ὲ)** ...[4] Not only did he determine such signal distinctions as between man and horse (**ἀνθρώπου, ἵππου**: traditional examples in the context of identification and classification of animals),[5] but apparently he likewise ascribed numbers to other kinds of animals, and to different kinds of plants too: ἀφωμοίου τε καὶ εἰς σχῆμα συνετίθει τόνδε μὲν τὸν τῶν ψηφίδων ἀριθμὸν ἀνθρώπου, ἄλλον δὲ ἵππου, καὶ τοὺς ἄλλους *εἰς ἄλλα εἴδη ζῴων καὶ φυτῶν*, Ps.-Alexander *l.c.* 827.24-6); **ἄλλου τινος**, then, potentially covers a whole range of objects; in

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[1] παντοδαποῖς χρώμασι κεχρωσμένας, Ps.-Alexander 827.12, cp. 24. This, incidentally, may account for **τινας** in our passage: contrast the article used by Aristotle, above.

[2] Timpanaro Cardini (1962), II.256 suggests that the different colours served to create the illusion of three *dimensions*—as indeed might be inferred from Ps.-Alexander's (827.13-5) use of the term σκιαγραφία (see also Raven (1948) 104-5); the use of the μὲν ... δὲ ... δὲ-clauses in σκιαγραφῶν ἄνθρωπον καὶ φυτὸν οὕτως ἐπήγνυ *τάσδε μὲν* τὰς ψηφῖδας ἐν τῇ τοῦ προσώπου σκιαγραφίᾳ, *τὰς δὲ* ἐν τῇ τῶν χειρῶν, *ἄλλας δὲ ἐν ἄλλοις*, however, strongly suggests that the different colours rather served to distinguish different *parts* of the objects represented. (Cp. Arist. *HA* 486 a 15 ff., note 5 below.) In this case, σκιαγραφεῖν/-ία simply means "outline", as in Philostratus *VA* I.2 καθάπερ ζωγράφος ἐσκιαγραφημένοις ἐπιβαλὼν χρώματα ("like a painter, he laid his own colours on to their rough sketches", tr. Conybeare).

[3] Bélis (1983) 74 argues that Eurytus' use of colours reflects an ancient Pythagorean doctrine according to which the surface or form of a body is naturally endowed with colour (referring to, *inter alia*, Arist. *Sens.* 439 a 30): "l' être vivant animé ou inanimé nombré par Eurytos, se définit par son apparence colorée" (*l.c.*).

[4] See Ps.-Alexander 826.35-6; cp. Aristotle's ὁδί, above.

[5] See e.g. Arist. *Met.* 1038 b 17 ff., *HA* 486 a 17 ff; also Speus. Fr. 63 d, quoted *ad* 6 b 5-6, p. 265 below. Cp. Rijlaarsdam (1978) 55-7, who conjectures that a proverb "to call a man a horse" may be at the root of this practice (see Plato, *Crat.* 385 A, *Tht.* 195 D, *et al.*).

In *HA* 486 a 15 ff. Aristotle cites man and horse as examples in order to show that *parts* may be specifically identical too: ἔχει δὲ τῶν ζῴων ἔνια μὲν πάντα τὰ μόρια ταὐτὰ ἀλλήλοις, ἔνια δ' ἕτερα. ταὐτὰ δὲ τὰ μὲν εἴδει τῶν μορίων ἐστίν, οἷον ἀνθρώπου ῥὶς καὶ ὀφθαλμός ἀνθρώπου, καὶ σαρκὶ σάρξ, καὶ ὀστῷ ὀστοῦν · τὸν αὐτὸν δὲ τρόπον καὶ ἵππου καὶ τῶν ἄλλων ζῴων, ὅσα τῷ εἴδει ταὐτὰ λέγομεν ἑαυτοῖς · ὁμοίως γὰρ ὥσπερ τὸ ὅλον ἔχει πρὸς τὸ ὅλον, καὶ τῶν μορίων ἔχει ἕκαστον πρὸς ἕκαστον.

view of the standard examples, however, one might well think of 'plant' (as a genus) in particular.[1]

For Eurytus' practice Th. refers to the authority of Archytas, the Pythagorean of a younger generation and friend of Plato.[2] Th. may have derived this story from one of the writings of Archytas—some of which at least are likely to have been available in the Peripatos, since the lists of Aristotle's works include a work on Archytas' philosophy and even extracts from his works,[3] and Aristoxenus wrote a *Life*.[4] If there was something which was (later?) known as Archytas' 'Διατριβαί',[5] this might provide a context accounting for the somewhat puzzling **ποτ' ἔφη**. In any case, even without assuming that Archytas appeared as a speaking person in a work of his own writing, it seems that Th. had access to some work, or oral report, in which Archytas did in fact figure as a speaker.[6]
In view of the detail of the story (and the directness of λέγειν in particular), the reference to a (suppositious) eye-witness is not in itself surprising.

The distribution of information centers on the thoroughness of Eurytus' explanation: (**τοῦτο ...**) **ὅπερ** (instead of ὥσπερ)[7] ... **ποιεῖν** points forward to

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[1] The example brought forward by Ps.-Alexander (*l.c.* 827.9-22) is man (250 pebbles) and plant (360 pebbles; the picture includes roots and branches); i.e., 10 x 5^2 and 10 x 6^2 respectively: see Bélis (1983) 73, who conjectures that the story may have been in Archytas' Περὶ δεκάδος (*l.c.* 75)—but see below.

[2] See Plato *Ep.* VII, 338 C ff.; for further testimonies, DK I.421-31. "One could hardly ask for a more trustworthy witness on this [sc. Eurytus'] generation of Pythagoreans than Archytas.", Raven (1948) 103.

[3] DK I.425.15-20. Bélis conjectures that Aristotle's knowledge of Archytas—if it is not immediate—might derive from Speusippus' treatise *On the Pythagorean Numbers* ((1983) 67 n. 5). R-F (after DK, I.425.20) suggest that Th.' knowledge may derive from Aristotle's work.

[4] Frr. 47-50 Wehrli.

[5] DK I.438.5 ff. The fragment ("Discussioni") is included in Timpanaro Cardini's edition, (1962) II.376; Thesleff (1965) 2 refers to the Διατριβαί as one of "the fragments likely to be authentic"; doubts on its authenticity were expressed by Zeller III.2, 120 n.

[6] Cicero, *Sen.* 39-41 and *Am.* 88 "suggest that Archytas gave 'addresses' to a wider circle, comparable with the speeches attributed to Pythagoras in Croton" (De Vogel (1966) 141); "the content and purport of Archytas' speeches" was known to Cicero "on the basis of an [oral] tradition which can be traced in detail" (*ibid.*).
It has been argued by Burkert (1962) 44 that in the case of Th.' report "wir [haben] offenbar eine durch die Kontakte der Akademie mit Grossgriechenland vermittelte mündliche Tradition". Hommel (1955) 322-3 suggests that the oral tradition referred to in Cic. *Am.* 88 (verum ergo illud est, quod a Tarentino Archyta, ut opinor, dici solitum nostros senes commemorare audivi ab aliis senibus auditum) in fact derives from Th.' περὶ φιλίας; the references would be to Aristotle & other disciples of Plato, and to Plato & his contemporaries respectively. The present anecdote would have followed the same route. The tradition appealed to in Cic. *Sen.* cannot be transposed to Greece as easily, as Hommel (331 n. 27) realizes.

[7] Which would have given better grounds for L-M's suggestion that "Théophraste pourrait (...) reprendre d' Archytas la justification qu'il donne de la démarche d'Eurytos" (see also below).

λέγειν κ.τ.λ., whereas the performance with the pebbles merely provides the background. Although it is likely that Th. recalls this background not without a sense of irony (appreciating that Eurytus' somewhat playful proceedings contrast with the adult quality recognized in his intellectual efforts: see *ad* τελέου καὶ φρονοῦντος, above),[1] his approval of the comprehensive scope of Eurytus' explanations seems to be serious enough.

Cp. BÉLIS (1983) 67-8. Somewhat differently R-F *ad loc.*: "The procedure was a naïve one, and there is probably some irony in T.'s approval of it.". In any case it cannot be maintained that, like Aristotle, Th. refers to Eurytus "con intento critico", as TIMPANARO CARDINI (1962) II.253 has it. On the other hand, it is both speculative and unnecessary to the understanding of the present passage to posit that "Théophraste corrige manifestement une tradition relative à la naïveté d'Eurytos." (L-M *ad loc.*).

That there was any malice in *Archytas*' report of Eurytus' proceedings (as PHILIP, (1966) 33, holds) cannot possibly be deduced from the present passage.[2]

III.2 (6 a 23 – b 17) *In practice most philosophers fail to give an account of the lower levels of being; for instance the adherents of the one and the indefinite dyad who, after having explained the more abstract phenomena, fail to make mention of the heavens and the rest of nature. This also holds for Speusippus, who does not point out any causal or otherwise functional relations between the different constituent parts of nature either. Xenocrates, who does provide a complete explanation, paying equal attention to all provinces of being, constitutes a favourable exception; Hestiaeus, too, is at least aware that philosophical explanation should extend beyond the level of the principles.*

Seen in this perspective, Plato might seem to be doing quite well, insofar as he includes the physical entities in his account of being, both in the inductive and in the deductive part of his explanation. For some philosophers, however, being and truth consist in the principles.

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[1] Still, if it may be inferred from Ps.-Alexander's report that Eurytus did indeed differentiate between leaves, branches and roots of (different kinds of) plants by using pebbles of different colours (*In Met.* 827.20-1; see also above)—this practice would testify to an interest which would have been sympathetic to Th.
For Th.' scepticism with regard to the explanation offered by number theorists in general see I.3, 4 a 18 ff.

[2] In this context it may be noted that, according to Plutarch, Archytas himself was criticized by Plato for his own practical application of mathematics: *Quaest. conv.* VIII.2, DK

6 a 23-4 νῦν δ' ... καταπαύονται

νῦν introduces the actual state of affairs,[1] as opposed to (δ(έ)) the situation which might be expected (ἀξιώσειεν ἄν τις, 6 a 16; see also *ad* τελέου καὶ φρονοῦντος, 6 a 19). Compare

> *Sens.* 71 ἔτι δὲ τὸ θερμόν τε καὶ ψυχρόν, ἅπερ ἀρχὰς τιθέασιν, *εἰκὸς* ἔχειν τινὰ φύσιν, εἰ δὲ ταῦτα καὶ τὰ ἄλλα. *νῦν δὲ* σκληροῦ μὲν καὶ μαλακοῦ καὶ βαρέος καὶ κούφου ποιεῖ (sc. Democritus) τιν' οὐσίαν, ..., θερμοῦ δὲ καὶ ψυχροῦ καὶ τῶν ἄλλων οὐδενός.

As it is, most people (**οἱ πολλοί**; or, most philosophers—which constitute the relevant group: see preceding note) do not live up to the expectation just expressed. The prefix in °**ἐλθόντες καταπαύονται** is in a sense opposed to that in (μὴ) *προ*ελθόντα °παύεσθαι; this seems to reflect a difference in focus, which in the earlier passage is on the limitation: "one should not proceed *to* a certain *point* (and stop there)", whereas in the present passage this expectation has been made explicit: the crucial fact is that most people do (proceed to a certain point and) leave off.[2] **γε** stresses that only a *majority* is intended; in what follows Th. brings forward a genuine exeption (Xenocrates) and a partial one (Hestiaeus). Plato, who apparently constitutes a third exception, is advanced as a special case. See commentary *ad locc.*

οἱ πολλοί will be exemplified by "those who posit the One and the indefinite dyad"; it seems that those referred to by τῶν ἄλλων in 6 b 6 and by οἱ δέ in 6 b 15 must be looked for among the adherents of these principles too.

6 a 24 – b 5 καθάπερ καὶ ... ποιοῦνται μνείαν.

καθάπερ καί expressly introduces this example as one among others.[3] For **οἱ ... ποιοῦντες**, see Bonitz (3 s.v.): "ποιεῖν τι cogitatione, i e τίθεσθαι"; e.g.

[1] Cp. 5 b 21. *Pace* L-M ("à présent"), referring to Arist. *Met.* 992 a 32-3 γέγονε τὰ μαθήματα *τοῖς νῦν* ἡ φιλοσοφία.

[2] For the phenomenon, see e.g. Renehan (1976). I owe the interpretation of the phenomenon in terms of focus to Professor C.M.J. Sicking.

[3] On the other hand, the example is, of course, not quite arbitrary; to some extent it is possible to agree with Kraemer (1973) 209: "Zeitgenossenschaft (νῦν δ' οἵ γε πολλοί 6 a 23 [but see *ad* νῦν above]) und gemeinsame Abkunft von Platon ... verbinden sich wohl mit dem Bewusstsein, dass im akademischen Derivationssystem die erste voll ausgearbeitete philosophische Prinzipientheorie vorliegt und dass sie für die peripatetische Prinzipienlehre in verschiedener Hinsicht vorbildlich gewesen ist ... Theophrast versucht, die methodischen Erfahrungen der untereinander recht verschiedenartigen akademischen Systementwürfe in seine kritische Prinzipientheorie einzubringen und dadurch deren Reichweite auszudehnen."—on the understanding that there is not strictly an 'extension' of the scope of Th.' theory, insofar as the present argument is quite general, covering the way people proceed on the basis of *any* principles assumed (6 a 15-8).

οἱ ποιοῦντες τά τε εἴδη καὶ τὰ μαθηματικά, Arist. *Met.* 995 b 16-7; πάντες γὰρ ἐξ ἐναντίων ποιοῦσι πάντα, *ibid.* 1075 b 28-9, εἰσὶ δέ τινες οἳ δυάδα μὲν ἀόριστον ποιοῦσι τὸ μετὰ τοῦ ἑνὸς στοιχεῖον *ibid.* 1088 a 29. As appears from 11 a 27 ff., for Th. "those who posit the One and the indefinite dyad" include Plato and the Pythagoreans; other Platonists, like Xenocrates, are apparently included (see *ad* τῶν ἄλλων, 6 b 6); Speusippus (who does not posit the indefinite dyad) "and his followers" are not included: see *ad* ὡσαύτως κ.τ.λ., 6 b 5-6.

Xenocrates, as well as Plato himself, will be brought forward as a favourable exception to the disappointing rule (6 b 7 ff., 6 b 11 ff.). We must conclude, then, that we cannot identify any pertinent examples envisaged by Th.;[1] if we do not wish to infer that he is making unwarranted claims, we must admit that Th.' reference escapes us—and even reckon with the possibility that those referred to might be unknown to us even by name.

ἡ ἀόριστος δυάς[2] occurs in Aristotle with reference to the principle of number assumed by Plato (or the Platonists): *Met.* 1081 a 15, cp. 1082 b 30, 1091 a 6. It was apparently ascribed to Plato explicitly in Arist. *De bono*,[3] as having been mentioned in Plato's own lecture "On the Good". Since the value of these testimonies is not beyond dispute,[4] we cannot tell whether the formula is genuinely Platonic.[5]
For the Pythagoreans compare

> S.E. *Adv. Math.* X.282 ἐκεῖνοι (sc. the earlier Pythagoreans) μὲν γὰρ ἐκ δυεῖν ἀρχῶν, τῆς τε μονάδος καὶ τῆς ἀορίστου δυάδος, ἐποίουν τοὺς ἀριθμούς, εἶτ' ἐκ τῶν ἀριθμῶν τὰ σημεῖα καὶ τὰς γραμμὰς τά τε ἐπίπεδα σχήματα καὶ τὰ στερεά· ...[6]

For discussion and literature see R-F and REALE *ad loc.*

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[1] Cp. TARÁN (1981) 381.

[2] For this formula see ROBIN (1908) 635 ff.

[3] Fr. 2, p. 113 ff. Ross.

[4] See e.g. TARÁN (1981) 225-6 who thinks it more probable that the *terminus technicus* was introduced by Xenocrates; see also *ad* 6 b 6-9 below.

[5] Simplicius (*In Phys.* 151.6 ff.; Fr. 2, p. 117 Ross), apart from maintaining that Plato's use of this formula could be learned not only from Aristotle, but also from Speusippus and Xenocrates, "and the others present at Plato's lecture", also claims likelihood for this view: καὶ τὸν μὲν Πλάτωνα ἀρχὰς πάντων λέγειν τὸ ἓν καὶ τὴν ἀόριστον δυάδα πάνυ εἰκός (Πυθαγορείων γὰρ ὁ λόγος, καὶ πολλαχοῦ φαίνεται Πυθαγορείοις ὁ Πλάτων ἀκολουθῶν), κ.τ.λ. For Xenocrates, see p. 266 below.

[6] "si l'on songe combien est d' ordinaire précise et sûre l'information historique chez les Sceptiques, on pourra voir dans ce témoignage de Sextus une confirmation de celui de Théophr.", ROBIN (1908) 650. Cp. KUCHARSKI (1959).

The passage introduced by **γάρ** (6 a 25) makes explicit the relevance of the example: these philosophers do in fact proceed to a certain point and leave off there: see (i) σχεδὸν τἆλλα παραλείπουσιν, (ii) τοσοῦτο μόνον δηλοῦντες, (iii) ... πέρι ... οὐδεμίαν ἔτι ποιοῦνται μνείαν.

γεννήσαντες (γεννᾶν in the sense of γένεσθαι λέγειν: see BONITZ s.v.), obviously, as far as the numbers (**τοὺς ἀριθμούς**) are concerned: i.e. from the One and the indefinite dyad. The Platonist theory to this effect is criticized by Aristotle in *Met.* 1081 b 17-8 τούτων δὲ ὄντων ἀδύνατον τὴν γένεσιν εἶναι τῶν ἀριθμῶν ὡς γεννῶσιν ἐκ τῆς δυάδος καὶ τοῦ ἑνός. Th., however, does not make this explicit, so that it is also left unspecified whether the philosophers referred to posit that the two-, and three-dimensional objects (**τὰ ἐπίπεδα**, "planes", **τὰ σώματα** "bodies", or rather: "solids", see below)[1] are generated from the One and the indefinite dyad *immediately* (or whether the numbers themselves play a role as well: see *ad* 6 b 2).

σῶμα[2] is the non-technical term, here obviously used as an equivalent of ὄγκος ("solid"):[3] the generation of *physical* bodies is precisely the point at which the philosophers in question are found wanting. (Cp. L-M *ad loc.*)

For **σχεδόν** modifying **τἆλλα** cp. *CP* II.8.4 σχεδὸν δὲ καὶ ἐν τοῖς ἄλλοις (sc. fruits) γίγνεταί τις τοσαύτη μεταβολή, τῶν μὲν ἐπ' ἔλαττον, τῶν δ' ἐπὶ πλεῖον, *HP* I.1.12 σχεδὸν δὲ καὶ τὰς ἄλλας μορφὰς ἑκάστων ταῦτα διασημαίνει, and III.18.1 ἔχει δὲ καὶ τἆλλα σχεδὸν ὄρη φύσεις τινὰς ἰδίας ...

For Th.' criticism to the effect that they (σχεδὸν τἆλλα) **παραλείπουσιν** (leave out, sc. of their account: cp. παραλείπει καὶ οὐ λέγει, *Sens.* 83) **πλὴν ὅσον ἐφαπτομένοι**, cp. a similar complaint in

> *Sens.* 59-60 περὶ δὲ τῶν αἰσθητῶν, τίς ἡ φύσις καὶ ποῖον ἕκαστόν ἐστιν, οἱ μὲν ἄλλοι *παραλείπουσιν*. ... οἱ δὲ ἄλλοι *τοσοῦτον μόνον*, ὅτι .... *ἐφ' ὅσον* δὲ ἑκάτερος *ἧπται* ... πειραθῶμεν ἀποδοῦναι, ...
> Cp. also θερμοῦ δὲ καὶ ψυχροῦ *καὶ τῶν ἄλλων οὐδενός Sens.* 71, preceding note.

As ἐφ' ὅσον ... ἧπται (*Sens.* 60, above) shows, the verb ἐφάπτεσθαι[4] by itself does not imply that those things which *are* generated by these people are, moreover, treated in a perfunctory way; see also

> Plato *Symp.* 212 A 3-4 τίκτειν οὐκ εἴδωλα ἀρετῆς, ἅτε οὐκ εἰδώλου ἐφαπτομένῳ, ἀλλὰ ἀληθῆ, ἅτε τοῦ ἀληθοῦς ἐφαπτομένῳ.

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[1] For this series of mathematical objects with (increasing, c.q.) decreasing corporality, cp. Plut., *Quaest. Plat.* 1001 F- 1002 A.
[2] Defined as τὸ ἔχον τρεῖς διαστάσεις in Arist. *Top.* 142 b 25; see also Arist. *Met.* 1020 a 14.
[3] Arist. *Met.* 1089 b 14.
[4] "lay hold of", "reach" with the mind, "attain to", LSJ s.v. II.2.

The point made in the words σχεδὸν τἆλλα παραλείπουσιν πλὴν ὅσον ἐφαπτόμενοι is restated from the opposite, positive point of view in **καὶ τοσοῦτο μόνον δηλοῦντες, ὅτι** (τὰ μὲν ..., τὰ δ' ...). **τόπος, κένον**, and **ἄπειρον** all involve the notion of place, the second and third of them being increasingly divorced from occupation: place *(to be) occupied* by an entity, place *not occupied* by any entity, and place *which cannot be occupied* by any entity, respectively.

It seems very unlikely that the three terms are alternative ways of referring to Plato's doctrine of χώρα, as R-F suggest, not only because Plato himself will be expressly excepted from those characterized by the present attitude, but also because in the present context the three terms are clearly conceived as standing for distinct entities. Futhermore, "Plato did not believe in the existence of the void (cf. *Timaeus* 60C, 79B, 80C) and this doctrine is not attributed to him either by Aristotle or Theophrastus.", TARÁN (1966) 471.
Cp. also ISNARDI PARENTE (1971) 52.

These different kinds of place are generated from the principle of the indefinite dyad; the philosophers referred to generate more specific entities "from the numbers and the One"—i.e., presumably, from the numbers which are generated themselves from the One (and the indefinite dyad): soul (**ψυχή**: hardly the most concrete of individuals), and "certain other things" (**ἄλλ' ἄττα**): see below. We are left in the dark as to how soul is taken by these philosophers to be generated from 'the numbers and the One', unless we are supposed to think of such a process as the Demiurge's blending of the world-soul (distributed according to the intervals of a musical scale), as expounded by Timaeus in Plato *Tim.* 34 B 10 ff.[1] As said above, however, the situation described here does not apply to Plato himself.

ἄλλ' ἄττα is apparently specified by the addition **χρόνον δ' ἅμα καὶ οὐρανὸν καὶ ἕτερα δὴ πλείω**.[2] The clarification, which fails in one manuscript (L; del. J^2), may have originated as an addition *in margine*:[3] note the rupture in the syntax, with the accusative cases depending on a verbal notion

[1] See R-F *ad loc.*
[2] *Pace* TARÁN (1981) 380 n. 192, who dismisses this possibility because of "the philosophical nonsense of ascribing the derivation of οὐρανός from numbers and the One to a theory that posits the One and the Indefinite Dyad as the supreme principles"; it might be objected, however, that (1) the generation from '*numbers and* the One', *as opposed to* that from the indefinite dyad, is somewhat irregular anyway (see also above), and (2) the main issue seems to be the generation of soul, time, & circumference of the world, in their status of related entities with a low degree of concreteness (or, triviality): see below.
[3] Cp. RITTER (1826) 146-7.

such as γεννῶσι.[1] In view of the unpolished nature of the text in general it seems apt to put the addition in parenthesis. With "time" and "heaven" we have two more examples of relatively abstract or remote entities: here **οὐρανός** presumably refers to the outermost sphere, the rotation of which is primarily connected with time; in any case **ἅμα** indicates that time and heaven, as far as their generation is concerned, are connected with (the world-)soul themselves; cp. the use of **δ'** instead of θ'—the latter of which would have been quite appropriate for introducing an addition; in that case, however, ἅμα would apply to the generation of χρόνος and οὐρανός only.[2]

For the coördination of soul, time and heaven, in Platonic and Pythagorean circles, see

> Plato *Tim.* 38 B 6-7 χρόνος δ' οὖν μετ' οὐρανοῦ γέγονεν, ἵνα ἅμα γεννηθέντες ἅμα καὶ λυθῶσιν, ...
>
> Arist. *Phys.* 218 a 33-4 οἱ μὲν γὰρ τὴν τοῦ ὅλου κίνησιν εἶναί φασιν (sc. τὸν χρόνον), οἱ δὲ τὴν σφαῖραν αὐτήν—referring, apparently, to Plato and to certain Pythagoreans respectively: WICKSTEED/CORNFORD *ad loc.*
>
> Plato *Tim.* 34 B 3-6 ψυχὴν δὲ εἰς τὸ μέσον αὐτοῦ θεὶς διὰ παντός τε ἔτεινεν καὶ ἔτι ἔξωθεν τὸ σῶμα αὐτῇ περιεκάλυψεν, καὶ κύκλῳ δὴ κύκλον στρεφόμενον οὐρανὸν ἕνα μόνον ἔρημον κατέστησεν, ...; see TAYLOR "(the cosmic ψυχή) is 'wrapped round' the οὐρανός, because Timaeus is thinking of the supposed diurnal revolution of the outermost heaven as the most uniform and orderly of all movements and thus as most fully revealing the presence of an intelligent ψυχή.", 105 *ad loc.*

Although the reference again is decidedly not to Plato, L-M (cp. also R-F) may be right in affirming that "c'est au *Timée* que les doctrines académiques ici discutées se réfèrent très vraisemblablement." (*ad loc.*).

This elaboration (possibly *in margine*) of ἄλλ' ἄττα repeats the (now obvious: **δή**) claim that this series can be extended, and indeed with several other examples (viz. of a comparatively abstract nature). The addition of **καὶ ἕτερα δὴ πλείω**, then, makes it even clearer than καὶ ἄλλ' ἄττα does, that the emphasis is not so much on the actual examples as on the level of generality of the entities included in the explanations provided by these philosophers.

USENER (1861) 270 n., who makes the accusatives χρόνον and οὐρανόν dependent on παραλείπουσιν (6 a 27), proposes to read χρόνον *θ'*. "Aber wegen der Unübersichtlichkeit und Unschönheit dieser Konstruktion ist der Gedanke in einem besonderen Satz τοῦ δ' – μνείαν ausgesprochen worden. Dieser ist demnach

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[1] So R-F, *ad loc.*; ISNARDI PARENTE (1971) 54 n.12; ἐφαπτόμενοι γεννῶσι "('ils engendrent, mais en ne faisant que les effleurer ...')", L-M *ad loc.*

[2] The reverse is, of course, not true: in ψυχὴ δ' ἅμα δοκεῖ καὶ κίνησις ὑπάρχειν (5 b 3) ἅμα does apply to the coexistence of the two entities; in that context, however, a connection by means of τε is not an alternative.

beizubehalten und die erste Fassung χρόνον – πλείω zu verwerfen." (*l.c.*). That παραλείπουσιν should be understood, however, is very unlikely, since the examples of time and heaven are on a par with soul rather than with the phenomena lower down in the hierarchy of being (which are those neglected by the philosophers criticized).

τοῦ δ' οὐρανοῦ πέρι καὶ τῶν λοιπῶν οὐδεμίαν ἔτι ποιοῦνται μνείαν makes explicit what is left implied in τοσοῦτο μόνον in 6 a 27-8. The apparent inconsistency between the statement that these people do not mention the **οὐρανός**, and the preceding statement that they do 'generate' such things as οὐρανός, is not too awkward if the purport of the present complaint is that these philosophers, who leave off after having generated the more abstract phenomena (including the outermost sphere, the rotation of which is immediately connected with number and time), do not make mention anymore of the heavens in the sense of the upper levels of the physical world and the rest of nature (with **τῶν λοιπῶν** referring to τὰ περὶ τὸ μέσον, 5 b 12).—The awkwardness of οὐρανός used with two different references[1] in one and the same context disappears on the supposition that χρόνον δ' ... πλείω is a (later) addition: see above.

In order to solve this problem L-M[2] suggest to read ἀνθρώπου (cp. 6 a 21) instead of οὐρανοῦ. They refer to 5 b 20, where the abbreviation of οὐρανοῦ seems to have been misinterpreted, in a part of the manuscript tradition, as representing ἀνθρώπου.[3]

Although this conjecture is certainly attractive, I prefer to follow the manuscript tradition (as L-M also do), which yields good sense on the supposition that χρόνον ... πλείω is a marginal addition (as is likely for reasons unconnected with the present issue: see above).

For the use of (οὐκ) **ἔτι** indicating a further step which is (or is not) made, compare

Sens. 4 ἂν δ' ἰσάζωσι τῇ μίξει, πότερον ἔσται φρονεῖν ἢ οὔ, καὶ τίς ἡ διάθεσις, οὐδὲν ἔτι διώρικεν.

82 ποῖον δέ τι τὴν φύσιν ὂν ὑπὸ τίνος πάσχει, οὐκέτι προσέθηκεν, ὅπερ ἴσως κυριώτατον.

οὐδεμίαν (... μνείαν) is quite strong, such in accordance with the fact that the present criticism concerns the (lack of) comprehensiveness of explana-

[1] For which see Arist. *Cael.* 278 b 11-21, p. 231 above; cp. p. 246.

[2] *Ad loc.* See also Laks (1988) 242 and 253 n. 67.

[3] A similar error in 7 a 11, referred to by Laks (1988) 253 n. 67, does not reappear in L-M's *app. crit. ad loc.*

tion, not the character of the explanations given: the issue is whether the entities lower down in the hierarchy of being are accounted for at all (rather than the plausibility of any explanation provided).

6 b 5-6 ὡσαύτως δ' ... Σπεύσιππον

ὡσαύτως δ' presents Speusippus *c.s.* as a new, but analogous instance,[1] apparently not belonging to those who form Th.' particular example here: the adherents of the One and the indefinite dyad. As a matter of fact it seems that Speusippus himself did not posit as a second principle the indefinite dyad (but posited 'multiplicity' (πλῆθος) instead).[2] On the other hand the fact of Speusippus, as a Platonist, figuring in this context is natural enough. In any case the point seems to be that, notwithstanding a somewhat different conception of the first principles, he is not doing any better in respect of the point at issue here.

It appears from the negation (οὐδέ) in what follows that in ὡσαύτως too a verdict in the negative is implied. It is unlikely that we should supply τοῦ οὐρανοῦ πέρι καὶ τῶν λοιπῶν οὐδεμίαν ποιοῦνται μνείαν, since (1) Speusippus himself cannot in fairness be blamed for neglecting the things of nature (cp. e.g. the classification of animals and plants in the second book of his Ὅμοια: Frr. 6-27 Tarán; also 11 a 23-5 with note), and (2) **οἱ περὶ Σπεύσιππον** may refer to Speusippus himself primarily.[3] What should be understood with ὡσαύτως ... οἱ περὶ Σπεύσιππον, then, seems to be, more generally, "do not come up to this expectation"; see 6 a 15-22.

In the case of Speusippus, then, the criticism may be either (1) that he is not interested in the natural entities *as such*,[4] or (2) that he fails to show in what way the lower entities can be derived from the principles assumed;[5] the

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[1] Cp. e.g. *CP* I.9.2 ὡσαύτως δὲ καὶ τὰ τῶν ἀγρίων, *Sens.* 63 ὃ ἡμῖν γλυκύ, τοῦτ' ἄλλοις πικρὸν καὶ ἑτέροις ὀξὺ καὶ ἄλλοις δριμὺ τοῖς δὲ στρυφνόν, καὶ τὰ ἄλλα δ' ὡσαύτως.; see also 11 a 13 below.

[2] See TARÁN (1981) 38 ff., 351.

[3] "formula οἱ περί τινα ... interdum ita usurpatur, ut ab ipso personae nomine non multum differat" BONITZ s.v. περί 579 a 41 ff.

[4] JAEGER (1938) 179-80 "Das diese Forschungen nicht auf eine individuelle Beschreibung und anatomische Zergliederung der Tiere und auf physiologische Erklärung ihrer inneren Lebensvorgänge zielten, scheint mir sonnenklar. Das Interesse wurde offenbar nur auf die Eigenschaften der Objekte ausgedehnt, die zur Bildung des richtigen Begriffs bzw. der Definition und zur Ansetzung des εἶδος an der richtigen Stelle im System der Klassifikation des Seienden erforderlich waren"; cp. JAEGER (1923) 18. Cp. however GUTHRIE V.132.

[5] Or, (3) both at the same time: "Immerhin benutzte Speusipp gewiss nicht das Schema: Phänomenen – Ursachen; er folgte ja offensichtlich dem platonischen Schema: Hypothese – Dihäresen, wobei er gewiss die Phänomene nicht in der empirischen Breite wie Aristoteles entwickelte." KULLMANN (1974) 151.

latter possibility in any case would be in accordance with Aristotle's criticism:

Arist. *Met.* 1090 b 14-9 (...) ἐπιζητήσειεν ἄν τις μὴ λίαν εὐχερὴς ὢν περὶ μὲν τοῦ ἀριθμοῦ παντὸς καὶ τῶν μαθηματικῶν *τὸ μηθὲν συμβάλλεσθαι ἀλλήλοις τὰ πρότερα τοῖς ὕστερον*· μὴ ὄντος γὰρ τοῦ ἀριθμοῦ οὐθὲν ἧττον τὰ μεγέθη ἔσται τοῖς τὰ μαθηματικὰ μόνον εἶναι φαμένοις,[1] καὶ τούτων μὴ ὄντων ἡ ψυχὴ καὶ τὰ σώματα τὰ αἰσθητά· κ.τ.λ., see also *ad* μὴ ἐπεισοδιῶδες 4 a 14, p. 94-7 above.

Speusippus' failure to point out any causal relations between the different compartments of being may be connected with his reported conviction that it is impossible to provide a definition of any object, presumably because a point of reference which might bring order in the multitude of entities is lacking: accordingly, a definition of one thing would require knowledge of all existing things (see GUTHRIE V.465).

Speus. Fr. 63 d (= Philop. *In anal. post.* p. 405, 27 ff.) ἐπεχείρει ... οὗτος (sc. Σπεύσιππος) δεικνύειν, ὡς οὐκ ἔστιν ἀποδοῦναι ὁρισμόν τινος, λέγων ὡς ὁ θέλων δι' ὁρισμοῦ παραστῆσαι τὴν φύσιν τοῦ ἀνθρώπου ἢ τοῦ ἵππου ἢ ἄλλου τινὸς ὀφείλει γινώσκειν πάντα τὰ ὄντα καὶ τὰς διαφορὰς αὐτῶν καθ' ἃς διαφέρουσιν ἀλλήλων· οὕτως γὰρ παρίσταται ἡ φύσις τοῦ ἀνθρώπου ἢ τοῦ ἵππου ἢ ἄλλου τινὸς ἐν τῷ χωρίζεσθαι τῶν ἄλλων πάντων.

Cp. TARÁN (1981) 61: "Since Speusippus admitted both essential and accidental attributes in his classification and in his definitions, it is necessary to say that the Aristotelian conception of genus and species has no place in his system. He did use the words *eidos* and *genos*, and he may even have meant to refer with them, respectively, to less general and more general classes; but he can hardly have used them in the technical Aristotelian sense. For Aristotle's genera and species are established on the basis of essential attributes only, and his notion that the species is the actualization of the genus in the final differentiae is incompatible with Speusippus' conception of an entity as the focus of *all* its relations to every other entity and to the whole. In fact, for Speusippus all attributes, because they are relations, are "essential;" and, since relations are established by the determination of similarity, similarity itself is an essential bond."
This attitude in itself might have been not unsympathetic to Th.; it may be significant that "to express the relation of the lower to the higher class [Speusippus] seems to have used the word μέρος", TARÁN *o.c.* 256; cp. 10 a 4-5 below. Speusippus, however, seems to have shown a striking lack of interest in the question πῶς μέρη (5 b 21), of primary importance to Th. himself.

It may be supposed, then, that Th.' criticism concerns Speusippus' failure (and, on his premises, inability) to point out any causal (or otherwise

[1] "That the criticism is directed against Speusippus is clear from VII.ii.4.", TREDENNICK *ad loc.*

functional) relations between the different constituent parts of nature; his reported failure to provide a definition of natural entities might be regarded as the ontological counterpart of this criticism.

Given that an interest in natural organisms cannot be denied to Speusippus, and taking into account that Th. might have used ὁμοίως instead, ὡσαύτως confirms the impression that the examples here brought forward serve to illustrate a general deficiency in completeness of philosophic *explanation*, regardless of whether the entities lower down in the hierarchy of being were after all discussed from some different point of view.

6 b 6-9 οὐδὲ ... τὰ θεῖα.

διατίθησιν Usener (1890); περιτίθησιν MSS.

For **οὐδέ** <sc. lives up to this expectation>, see preceding note. In view of the fact that Xenocrates himself belongs to those who posit the One and the indefinite dyad (it has even been argued that the latter phrase originates with Xenocrates),[1] it seems likely that with **τῶν ἄλλων** we return to the adherents of these particular principles. There is, therefore, no reason to wonder why Aristotle does not figure in this context as a favourable exception.

Th.' appreciation of Xenocrates, presumably his, and Aristotle's, companion during their stay in Assos[2] (and, later on, Speusippus' successor as the head of the Academy), is also shown by the fact that he made a *Summary*, in two books, of Xenocrates' doctrines ("which was not necessarily polemical", DILLON (1977) 39 n.).[3] Th. applauds the completeness of his explanation (**ἅπαντα**) as well as his impartiality in expounding it (**ὁμοίως**): cp., in a different context, his valuation of Democritus and Plato expressed in

> *Sens.* 60 Δημόκριτος μὲν οὖν οὐχ ὁμοίως λέγει περὶ πάντων, ἀλλὰ τὰ μὲν τοῖς μεγέθεσι τὰ δὲ τοῖς σχήμασιν ἔνια δὲ τάξει καὶ θέσει διορίζει. Πλάτων δὲ σχεδὸν ἅπαντα πρὸς τὰ πάθη καὶ τὴν αἴσθησιν ἀποδίδωσιν.

R-F (*ad loc.*) are right in referring to

> Arist. *Met.* 1028 b 24-7 ἔνιοι δὲ τὰ μὲν εἴδη καὶ τοὺς ἀριθμοὺς τὴν αὐτὴν ἔχειν

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[1] See ROSS *ad* Arist. *Met.* 1081 a 14; TARÁN (1981) 225; 316 n. 133; in Xenocr. Frr. 101 and 102 IP, however, the principle is referred to as τὸ ἀέναον.

[2] Strabo, *Geogr.* XIII.57; see GAISER (1985) 20-1.

[3] Th.' favourable judgement of Xenocrates notably contrasts with Aristotle's opinion of him, if RIST is right in putting that Aristotle "had come to have increasingly less respect for Xenocrates' philosophical competence; he was in general a conservative Platonist who tended, in Aristotle's view, often to compound Plato's errors without emphasizing his philosophical virtues." (1989) 28.

φασὶ φύσιν, τὰ δὲ ἄλλα *ἐχόμενα* ("dependent upon them", TREDENNICK), γραμμὰς καὶ ἐπίπεδα, *μέχρι πρὸς τὴν τοῦ οὐρανοῦ οὐσίαν καὶ τὰ αἰσθητά.*

The manuscript reading περιτίθησιν poses a problem in that, in the case of the metaphorical use of περιτιθέναι ("bestow, confer upon" LSJ s.v.), the receiving party is invariably put in the dative case (see e.g. τὸ τοὺς λόγους ἑκάστοις περιθεῖναι, 7 a 20). As a matter of fact, the verb seems to be less apposite anyway in so far as, it being quite possible to imagine κόσμος as being made to surround, or being bestowed upon "all things" (cp. 4 a 21-3, and Eurytus' activities described in 6 a 20 ff.), it is very hard to make sense of the reverse. Cp. the non-metaphorical use in λίθους περιτιθέναι περὶ τὸ πρέμνον τοῦ φυτευτηρίου ("circle the base of the slip with stones"), *CP* III.6.3.

As a result, one might either claim that περιτιθέναι 'is used here in the sense of διατιθέναι' (cp. L-M: "Le verbe περιτίθημι ... signifie "distribuer tout autour" au sens de "distribuer à travers"),[1] or adopt Usener's conjecture of **διατίθησιν**. Since this use of περιτιθέναι is not only unparalleled but also, as said above, not very likely from an idiomatic point of view—and the corruption of περιτίθησιν might be accounted for by the influence of the following περὶ τὸν κόσμον—, it seems preferable to read διατίθησιν ("arrange (each) in their several places": see *ad* 6 a 20).[2] Compare

Diog. B 5, II.61.6-8 DK αὐτὸ γάρ μοι τοῦτο (sc. ὁ ἀήρ) θεὸς δοκεῖ εἶναι καὶ ἐπὶ πᾶν ἀφῖχθαι καὶ πάντα διατιθέναι καὶ ἐν παντὶ ἐνεῖναι.

Xen. *Mem.* II.1.27 οἱ θεοὶ διέθεσαν τὰ ὄντα

Hippocr. *De victu* I.11 (I.185.31 – 186.3 DK) νόμον μὲν ἄνθρωποι ἔθεσαν αὐτοὶ ἑωυτοῖσιν, οὐ γιγνώσκοντες περὶ ὧν ἔθεσαν, φύσιν δὲ πάντων θεοὶ διεκόσμησαν. τὰ μὲν οὖν ἄνθρωποι διέθεσαν,[3] οὐδέποτε κατὰ τωὐτὸ ἔχει οὔτε ὀρθῶς οὔτε μὴ ὀρθῶς· ὅσα δὲ θεοὶ διέθεσαν,[4] ἀεὶ ὀρθῶς ἔχει καὶ τὰ ὀρθὰ καὶ τὰ μὴ ὀρθά· τοσοῦτον διαφέρει.

For the use of (ἅπαντα ...) **περὶ** (τὸν κόσμον) as an equivalent of ἐν + dative, cp. 6 b 16-7; "An mehreren Stellen [sc. in Th.' botanical works] steht ... περί durchaus für ἐν", MUELLER (1878) 21; e.g. *HP* I.4.2 τὰ μὲν ἐλάττω καὶ ἐν τῇ παρ' ἡμῖν (sc. θαλάττῃ) τὰ δὲ μείζω περὶ τὴν ἐρυθράν.

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[1] L-M continue: "ou même [au sens] d' "appliquer", comme dans ses autres occurrences, en dépit de la différence de construction", without explaining how to make sense of this use in this particular context. Their translation reads "celui-ci dispose d'une certaine façon toute chose autour de l'univers".

[2] In view of the tenor of Th.' praise, one might in this context refer to the title Περὶ τοῦ διακοσμοῦ ("On the World-Order") figuring in Diogenes' list of his works (V.43, 137.37 FHS&G). (A "critique" of Democritus' doctrine according to SOLLENBERGER (1984) 238; treatises bearing the title Μέγας διάκοσμος (ὃν οἱ περὶ Θεόφραστον Λευκίππου φασὶν εἶναι) and Μικρὸς διάκοσμος are listed among Democritus φυσικά by D.L. IX.46: see SOLLENBERGER 239.)

[3] ἔθεσαν Littré. (Cp. *ad* 6 a 23-4.)

[4] ἔθεσαν Littré.

Rather than detracting from ἅπαντα (in which case Th. would have used σχεδόν instead, as in *Sens.* 60 above; or, possibly, ὡς εἰπεῖν, for which see 11 b 4), **πως** presumably indicates that Th. refrains from specifying the way in which the different kinds of entities making up the cosmos are assigned to their several places; cp. e.g. *Ign.* 5 εἰς τὴν τοῦ θερμοῦ πως ἀνάγεται φύσιν; *Sud.* 18 ἐκ τούτων πως γινομένου; *CP* I.19.2 ἀλλήλοις πως συνημμένα. Cp. e.g. 4 a 12, 8 b 26.

ὁμοίως indicates that there is no essential difference in the treatment of the entities referred to—or of the first three (**αἰσθητά, νοητά, μαθηματικά**) at any rate. The purport of this addition seems to be in accordance with the attested evidence that Xenocrates "did not accept the doctrine, commonly regarded as the one predominant among Platonists, which affirms the ontological priority of what is more universal in relation to what is less" PINES (1961) 30; see Fr. 121 IP (the species is prior to the genus).[1]

In view of Aristotle's testimony that Xenocrates considered the objects of thought and the mathematical objects to be of the same nature (Arist. *Met.* 1069 a 35 εἰς μίαν φύσιν τιθέντες τὰ εἴδη καὶ τὰ μαθηματικά; also 1076 a 21),[2] it may be supposed that μαθηματικά here refers to the objects of astronomy (see *ad* 4 a 18); cp. ZELLER II.1., 1012 n. 7.

> Xenocr. Fr. 83 IP (= S.E. *Adv. Log.* I.147 f.) Ξενοκράτης δὲ τρεῖς φησιν οὐσίας εἶναι, τὴν μὲν αἰσθητὴν τὴν δὲ νοητὴν τὴν δὲ σύνθετον καὶ δοξαστήν, ὧν αἰσθητὴν μὲν εἶναι τὴν ἐντὸς οὐρανοῦ, νοητὴν δὲ ⟨τὴν⟩ πάντων τῶν ἐκτὸς οὐρανοῦ, *δοξαστὴν δὲ καὶ σύνθετον τὴν αὐτοῦ τοῦ οὐρανοῦ· ὁρατὴ μὲν γάρ ἐστι τῇ αἰσθήσει, νοητὴ δὲ δι' ἀστρολογίας.*

If that is so, the order of the items in this series is a little arbitrary, which seems to corroborate the purport of ὁμοίως.

If the following testimonies do indeed refer to Xenocrates,[4] they show that he did turn his principles to account for the understanding of the sensible world:

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[1] "Da un lato [Senocrate] afferma la priorità metafisica degli universali, o predicati unificatori ipostatizzati in forme ideali; dall'altro afferma la priorità metafisica di elementi eminentemente semplici sentiti come costitutivi del reale; per mettere in qualche modo d'accordo le due concezioni è costretto a portare nell'interno della stessa dottrina delle idee la priorità della parte-elemento costitutivo sul tutto-universale; ma cosí facendo mina alla base la stessa ragion d'essere della dottrina delle idee; la soluzione scelta, condotta alle sue conseguenze logiche, porta a negare tale dottrina." ISNARDI PARENTE 353 *ad loc.* Th.' appreciation of Xenocrates, then, might basically be connected with his own awareness of differences in valuation according to differences in scope as evinced in III.3 (6 b 17-22) below; see pp. 277 ff.

[2] Contrast Xenocr. Fr. 104 IP (Ascl. *In Met.* 379.17.19 ff.) εἶτα μετὰ τὰς ἰδέας δευτέρας οὐσίας ὑποτίθεται τὰς διανοητάς, τουτέστι τὰ μαθήματα, γραμμὰς καὶ ἐπίπεδα· τελευταῖα δὲ τὰ φυσικά.

[3] See ISNARDI PARENTE (1982) 429 ff. *ad* Xenocrates fr. 260; CHERNISS (1947) 244 n. 86 (*ad*

Fr. 260 IP (= Them. *Paraphr. in De An.* 11.19 ff.) ἐπειδὴ γὰρ ἐν τῷ νοητῷ κόσμῳ δεῖ πάντως τὰς ἀρχὰς παρεμφαίνεσθαι τοῦ αἰσθητοῦ, ὁ δὲ αἰσθητὸς ἐκ μήκους ἤδη καὶ πλάτους καὶ βάθους, τοῦ μὲν μήκους ἰδέαν εἶναι τὴν πρώτην ἀπεφήναντο δυάδα· ἀπὸ γὰρ ἑνὸς ἐφ' ἓν τὸ μῆκος, τουτέστιν ἀπὸ σημείου ἐπὶ σημεῖον κ.τ.λ.

Compare also

Arist. *DA* 404 b 19-21 (with reference to Plato's "lectures on philosophy") αὐτὸ μὲν τὸ ζῷον ἐξ αὐτῆς τῆς τοῦ ἑνὸς ἰδέας καὶ τοῦ πρώτου μήκους καὶ πλάτους καὶ βάθους, τὰ δ' ἄλλα ὁμοιοτρόπως.[1]

Met. 1084 a 32-6 γεννῶσι γοῦν τὰ ἑπόμενα, οἷον τὸ κενόν, ἀναλογίαν, τὸ περιττόν, τὰ ἄλλα τὰ τοιαῦτα, ἐντὸς τῆς δεκάδος· τὰ μὲν γὰρ ταῖς ἀρχαῖς ἀποδιδόασιν, οἷον κίνησιν στάσιν, ἀγαθόν κακόν, τὰ δ' ἄλλα τοῖς ἀριθμοῖς·—which might include natural entities too?[2]

Xenocrates' concern with the objects of sense may not have gone much further than their generation (or, derivation): see KULLMANN (1974) 162-3.

καὶ ἔτι marks τὰ θεῖα as an addition, which should speak for itself for the public (**δή**); compare

Plato *Resp.* 503 E 1-2 βασανιστέον δὴ ἔν τε οἷς τότε ἐλέγομεν πόνοις τε καὶ φόβοις καὶ ἡδοναῖς, καὶ ἔτι δὴ ὃ τότε παρεῖμεν νῦν λέγομεν, ὅτι καὶ ἐν μαθήμασι πολλοῖς γυμνάζειν δεῖ ...

In this enumeration of the different constituents of being, then, the divine entities apparently are not quite of the same order as the first three groups (note also the repetition of the article); this does away with the problem sometimes raised, that Xenocrates was preoccupied with triadic distincitions.[3]

ZELLER may be right in supposing that τὰ θεῖα "bildet keine eigene Klasse, sondern es findet sich ... in den drei andern, sofern diese aus dem theologischen Gesichtspunkt betrachtet werden" (II.1, 1012 n. 7);[4] see e.g.

Arist. *DA* 404 b 18 ff.), *ibid.* 237 n. 77, 246 n. 86 (*ad* Arist. *Met.* 1084 a 32 ff.); also TARÁN (1981) 380 f.

[1] "If we may follow *Timaeus* 30 C, D these will be the genera and species of living things included in the universe", HICKS p. 223 *ad loc.*

[2] ROBIN (1908) 317 assumes that τὰ δ' ἄλλα coincides with what is referred to by Th. as ψυχὴ καὶ ἄλλ' ἄττα (6 b 2-3, see pp. 261 ff. above); this seems to be unlikely, because in this passage in Aristotle the generation is from the numbers, explicitly opposed to the principles, whereas Th.' example concerns generation "from the numbers and the One". For further commentary see ROSS *ad loc.*

[3] See DILLON (1977) 30; for testimonies see also R-F *ad loc.*

[4] Cp. GUTHRIE II.474: "Xenocrates tended to see everything in theological terms. For him indeed 'everything was full of gods', as Thales said." The circumstance that Th., too, was notorious for extending the scope of the divine (see Cic. *N.D.* 1.35, 252A FHS&G) may be connected with his sympathizing with Xenocrates' view.

> Xenocr. Fr. 213 IP (= Aet. *Plac.* I.7.30) Ξενοκράτης Ἀγαθήνορος Καλχηδόντος τὴν μονάδα καὶ τὴν δυάδα θεούς, τὴν μὲν ὡς ἄρρενα πατρὸς ἔχουσαν τάξιν ἐν οὐρανῷ βασιλεύουσαν, ἥντινα προσαγορεύει καὶ Ζῆνα καὶ περιττὸν καὶ νοῦν, ὅστις ἐστὶν αὐτῷ πρῶτος θεός· τὴν δ' ὡς θήλειαν, μητρὸς θεῶν δίκην, τῆς ὑπὸ τὸν οὐρανὸν λήξεως ἡγουμένην, ἥτις ἐστὶν αὐτῷ ψυχὴ τοῦ παντός. θεὸν δ' εἶναι καὶ τὸν οὐρανὸν καὶ τοὺς ἀστέρας πυρώδεις Ὀλυμπίους θεούς, καὶ ἑτέρους ὑποσελήνους δαίμονας ἀόρατους. ἀρέσκει δὲ καὶ αὐτῷ ⟨θείας τινὰς δυνάμεις⟩ καὶ ἐνδιήκειν τοῖς ὑλικοῖς στοιχείοις.

It should be noticed, however, that, although this picture is not inconsistent with the present passage, it can on the other hand not be deduced from it, τὰ θεῖα being simply added as a fourth category, apparently of a different order.

6 b 9-11 πειρᾶται δὲ καὶ ... μόνον.

Of the Platonist Hestiaeus of Perinthus nothing more is known than that he edited the Platonic discourses on the Good, and that he himself discussed phenomena like time (conceived as φορὰ ἄστρων πρὸς ἄλληλα, *Doxogr. Gr.* 318.15-6) and vision (here Hestiaeus appears as the inventor of the ἀκτινείδωλον, the "ray-image" *ibid.* 403.19-21). The fact that he is referred to as φυσικός (*ibid.*, 318.15) seems to be in accordance with Th.' (fairly positive) appreciation of his attitude in the present context.

πειρᾶται sc. ἅπαντα διατιθέναι; **μέχρι τινός** expresses the insufficiency (rather than the inadequacy) of Hestiaeus' endeavours; apparently he is mentioned here because he at any rate was aware that philosophical explanation should extend beyond the highest levels of being.

The construction **οὐχ ... περὶ τῶν πρώτων μόνον**, incomplete as it is, does not require suppletion (of, e.g., λέγει, θεωρεῖ). For τὰ πρῶτα see *ad* 4 a 2-3; Eurytus' explanation, then, may have extended to the field of astronomy (cp. the opposition between τὰ πρῶτα τῆς φύσεως and the objects of astronomy in 10 a 5-6), and presumably included the explanation of physiological phenomena too (see above).

The reference of **ὥσπερ εἴρηται** is obscure. Elsewhere the phrase (also, without any apparent difference, καθάπερ εἴρηται, ὥσπερ/καθάπερ ἐλέχθη) mostly refers to some—more or less immediately preceding—passage in the same work: e.g. *CP* I.7.1, referring to the first sentence of the paragraph, cp. *Vent.* 36; *HP* IV.4.3, to IV.4.2; II.6.8, to II.6.6; II.1.4, to II.1.2; IV.7.1, to IV.6.4; cp. also II.2.2 (ὥσπερ ἐλέχθη πρότερον), to II.1.1; *Vent.* 10, to par. 2; *Od.* 37, to par. 34. Sometimes a greater distance is spanned: ὥσπερ εἴρηται πρότερον *HP* IV.4.4, apparently to I.7.3; but also *CP* I.11.4 (ὥσπερ ἐλέχθη), presumably to *HP* I.1.4; *CP* I.20.2 καθάπερ εἴρηται, to *HP* I.2.1; cp. *CP* I.9.1 καθάπερ ἐν ταῖς ἱστορίαις εἴρηται.

For the position of ὥσπερ εἴρηται after the negative cp. *CP* I.13.7 τὸ δὲ μετόπωρον οὐχ, ὥσπερ ἐλέχθη, ξηρὸν καὶ ψυχρόν ἐστιν, ἀλλὰ μᾶλλον θερμόν (referring to I.13.4, where autumn *was* said to be dry and cold). Now it is entirely a matter of speculation to look for a reference in it to some other treatise in which Hestiaeus figures as treating of the principles only;[1] it seems, therefore, preferable to assume that Th. is referring to the passage immediately preceding, which as to its intent could be summarized somewhat roughly as "most philosophers, apart from Xenocrates, treat of the first things only"—in which case ὥσπερ εἴρηται would amount to 'as was implied above'; cp. the similar simplification in οἱ δὲ τῶν ἀρχῶν μόνον, 6 b 15-6.

Another possibility, which would be more plausible if there were no other indication that Th. is simplifying the position he criticizes, is that ὥσπερ εἴρηται is limititative with regard to περὶ τῶν πρώτων μόνον: "(H.) does not, *in the way* said above, treat of the first things only"). Compare

HP II.2.11 κατὰ δὲ τὴν φυτείαν τὰ ἀπὸ τῶν σπερμάτων φυτευόμενα, καθάπερ ἐλέχθη· παντοῖαι γὰρ αἱ ἐξαλλαγαὶ καὶ τούτων. ("the changes which occur in things grown from seed are as was said" tr. HORT),

CP II.4.12 τὴν μὲν οὖν ἀρετὴν τῆς χώρας σχεδὸν ὥσπερ εἴρηται διὰ τῶν αὐτῶν πως καὶ ἐν τοῖς αὐτοῖς ἐστιν λαβεῖν ἐν οἷς καὶ ἀποδιδόασι πάντες· ("one can formulate excellence of land much as we have done by resorting to the same reasoning" tr. EINARSON/LINK).

6 b 11-6 Πλάτων μὲν οὖν ... μόνον.

Finally Plato, potentially the principal of those who are referred to in οἱ τὸ ἓν καὶ τὴν ἀόριστον δυάδα ποιοῦντες in 6 a 24-5,[2] himself is named as a favourable exception to the general attitude of neglecting (as far as explanation is concerned) the lower levels of being. **οὖν** seems to indicate that the positive evaluation of Plato (as opposed to 'others', **μέν** contrasting with οἱ δέ, 6 b 15) is what the preceding analysis leads up to:[3] in the light of this analysis, Plato would seem to stand out favourably (for δόξειεν ἄν, see below). It may be noted that Plato meets with Th.' approval also in *Sens.* 5 and *Sens.* 60 for paying comparatively much attention to the senses and their respective objects.

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[1] The possibility, entertained by L-M (*ad loc.*), that Th. is correcting a popular opinion concerning Hestiaeus seems to be ruled out by the use of εἴρηται (instead of λέγεται).

[2] See commentary *ad loc*, p. 259 above.

[3] μὲν οὖν "en guise de résumé" L-M *ad* 6 b 15-6.

ἀνάγειν εἰς τι,[1] to refer to an ontologically prior level, as a cause or explanation. Compare

Sens. 48 Διογένης μὲν οὖν, ὥσπερ εἴπομεν, ἅπαντα προθυμούμενος ἀνάγειν εἰς τὴν ἀρχὴν (sc., air) πολλὰ διαμαρτάνει τῶν εὐλόγων.
67 ὡσαύτως δὲ καὶ τὰς ἄλλας ἑκάστου δυνάμεις ἀποδίδωσιν (sc. Democritus) ἀνάγων εἰς τὰ σχήματα.
Alex. Aphr. *In Met.* 117.24 ff. (= Arist. *Philos.* Fr. 11 Ross) βουλόμενοι γὰρ τὰ ὄντα (ἀεὶ γὰρ οὐσίας τὰ ὄντα λέγει), ταῦτα δὴ τὰ ὄντα βουλόμενοι *ἀνάγειν εἰς τὰς ἀρχὰς* ἃς ὑπέθεντο (ἦσαν δὲ αὐτοῖς ἀρχαὶ τῶν ὄντων τὸ μέγα καὶ τὸ μικρόν, ἣν ἔλεγον ἀόριστον δυάδα), εἰς δὴ ταύτην θέλοντες πάντα ἀναγαγεῖν, τοῦ μὲν μήκους ἀρχὰς ἔλεγον τὸ βραχὺ καὶ μακρόν, κ.τ.λ.; cp. also *ibid.* 56.15-6 (*De bono* Fr. 2 Ross).

Also οὐκ ἔστιν εἰς ἕτερον ἀναγαγεῖν, 271.5 FHS&G (quoted *ad* 5 b 7-10, p. 220 above).

As appears from 6 b 14, **εἰς τὰς ἀρχάς** spans the whole field of operation: from the "other things" (see below) up to the ultimate principles, i.e. the One and the indefinite dyad.

For the sense of ἀνα- in this kind of compounds in Plato, see CLASSEN (1959) 57-8. "Immerhin wird deutlich, dass überall das Element "zurück" enthalten ist, d.h. näher zur ἀρχή, dem Anfang und Ursprung" (58). Cp. also ἀνάπτων, 6 b 13.

ἀνάγειν is used here without an explicit object:[2] "<things>" (cp. περιτιθέντων, 4 a 23), varying, as appears from what follows, according to the different phases in the process: (1) **τῶν ἄλλων**: the non-πρῶτα, presumably the objects of sense in particular;[3] (2) ταύτας, the Ideas; (3) τούτων, the (ideal) numbers.

The activity of **ἅπτεσθαι** ("take hold of", hence "deal with") admits of a specification of degree (apparently in contrast to θιγγάνειν, see 9 b 15): e.g. *Sens.* 5 Πλάτων δὲ *ἐπὶ πλέον* μὲν ἧπται τῶν κατὰ μέρος (sc. senses); Arist. *Phys.* 191 b 35 ἡμμένοι μὲν οὖν καὶ ἕτεροί τινές εἰσιν αὐτῆς, ἀλλ' *οὐχ ἱκανῶς*, *Met.* 990 a 33-4 περὶ μὲν οὖν τῶν Πυθαγορείων ἀφείσθω τὰ νῦν· (*ἱκανὸν* γὰρ αὐτῶν ἅψασθαι *τοσοῦτον*). See also *ad* ἐφαπτόμενοι 6 a 27. In addition, various degrees of engagement of the subject (implied by the middle) may be involved:

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[1] With πρός τι Arist. *PA* 648 a 23: πολλῶν γὰρ ἡ φύσις ἀνάγεται πρὸς ταύτας τὰς ἀρχάς, καὶ πολλοὶ διαμφισβητοῦσι ποῖα θερμὰ καὶ ποῖα ψυχρὰ τῶν ζῴων ἢ τῶν μορίων.

[2] J^2 and L insert τὰ ὑπὸ τὰς ἀρχάς.

[3] KULLMANN thus seems to be wrong in stating that Th. "Platon und Speusipp den Vorwurf [macht], im Unterschied zu Xenokrates und Hestiaios die Ableitung nicht bis in die Einzelheiten vorgenommen zu haben." (1974) 146.

Arist. *Met.* 1078 b 19-21 τῶν μὲν γὰρ φυσικῶν ἐπὶ μικρὸν Δημόκριτος ἥψατο μόνον καὶ ὡρίσατό πως τὸ θερμὸν καὶ τὸ ψυχρόν ("gained only a superficial grasp of the subject", tr. TREDENNICK)

1069 b 23-4 ὥστε τῆς ὕλης ἂν εἶεν ἡμμένοι ("Hence these thinkers must have had some conception of matter" *ibid.*)

GC 324 a 14-5 καὶ κατὰ λόγον δὴ τὸ μὴ ταὐτὰ λέγοντας ἀμφοτέρους ὅμως ἅπτεσθαι τῆς φύσεως ("are yet in touch with the nature of things", tr. FORSTER)

EE 1216 a 26-7 οἱ δὲ πολλοὶ χρημάτων καὶ πλεονεξίας ἕνεκεν ἅπτονται τοῦ ζῆν οὕτως ("embrace that mode of life" tr. RACKHAM).

In the present context there is no suggestion of the process being limited or perfunctory: Plato deals (or, would seem to deal: see below) with the "other things" by attaching them to the Ideas (**εἰς τὰς ἰδέας ἀνάπτων**). *ἀνάπτειν* is "to link up" something with something on a higher ontological level: see *ad* ἀνάγειν (of which ἀνάπτειν seems to be a more concrete—or, less intellectual—counterpart).

Cp. ἀνάπτειν τινί "attach to something (as an attribute)": ἀνάψειεν ἂν ταῖς ἀρχαῖς (sc. τὴν ἠρεμίαν), 7 b 11; *Sens.* 46 Διογένης μὲν οὖν πάντα βουλόμενος ἀνάπτειν τῷ ἀέρι πολλῶν ἀπολείπεται πρὸς πίστιν (cp. *Sens.* 48 ἀνάγειν, above); "attach to something (as an effect)", "ascribe to": τῷ θεῷ τὴν αἰτίαν ἀνάπτουσιν, 11 b 8.

One would suppose ἀνάπτειν εἴς τι to be used especially with the connotation of an (ontological) distance which is to be bridged: Plut. *Lyc.* 6.3 τὴν ἀρχὴν καὶ τὴν αἰτίαν τῆς πολιτείας *εἰς τὸν Πύθιον* ἀνῆψε. The present passage involves the connotation of an epistemological distance, that is, one of a process of induction; cp. e.g. Arist. *Met.* 1078 b 21-2 οἱ δὲ Πυθαγόρειοι πρότερον περί τινων ὀλίγων, ὧν τοὺς λόγους εἰς τοὺς ἀριθμοὺς ἀνῆπτον.

Th.' testimony as to Plato's linking up the Ideas (**ταύτας**) with the numbers is in conflict with "an imposing array of passages in which Aristotle says, or clearly implies, that for Plato all the Ideas were numbers" (e.g. *Met.* 991 b 9-10; 1073 a 20): ROSS (1951) 216 with n.1.[1]

As ROSS (*l.c.*)[2] has pointed out, the testimony of Sextus Empiricus, *Adv. Math.* 10.258, apparently supports Th.' way of presenting the matter:

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[1] For doubts concerning the weight of Aristotle's testimony, see ROSS (1951) 217, DILLON (1977) 4-5; that of Th.' report has been questioned e.g. by TARÁN (1981) 379.

[2] After WILPERT (1949) 168: "Deutlicher lässt sich wirklich nicht mehr sagen, dass die Zahlen von den Ideen verschieden sind und dass sie höher stehen als diese.", *l.c.*; cp. however *ibid.* 171: "Platon hat die Ideen als Zahlen begriffen, die Zahlennatur war das Mittel, die Struktur der Idee zu durchleuchten. Mit Recht kann Sextus und Theophrast das als Zurückführung der Ideen auf Zahlen darstellen. Aber diese Zurückführung der Ideen auf Zahlen ist keine Absonderung der Zahlen, kein Hinaufsteigern der Zahlen zu einer höheren Gattung über die Ideen, kein Chorismos der Zahlen von den Ideen. Die Zahlen sind nicht "früher" als die

ἰδοὺ γὰρ καὶ αἱ ἰδέαι ἀσώματοι οὖσαι κατὰ τὸν Πλάτωνα προϋφεστᾶσι τῶν σωμάτων, καὶ ἕκαστον τῶν γινομένων πρὸς αὐτὰς γίνεται· ἀλλ' οὐκ εἰσὶ τῶν ὄντων ἀρχαί, ἐπείπερ ἑκάστη ἰδέα κατ' ἰδίαν μὲν λαμβανομένη ἓν εἶναι λέγεται, κατὰ σύλληψιν δὲ ἑτέρας ἢ ἄλλων δύο καὶ τρεῖς καὶ τέσσαρες, *ὥστε εἶναί τι ἐπαναβεβηκὸς αὐτῶν τῆς ὑποστάσεως, τὸν ἀριθμόν*, οὗ κατὰ μετοχὴν τὸ ἓν ἢ τὰ δύο ἢ τὰ τρία ἢ τὰ τούτων ἔτι πλείονα ἐπικατηγορεῖται αὐτῶν. ("since while each Idea taken separately is said to be a unity, by virtue of its inclusion of another or other Ideas it is said to be two or three or four, so that there is something higher than their nature, by participation in which "one" or "two" or "three" or yet higher numbers are predicated of them." tr. Ross, *l.c.*)

In the present context it suffices to observe that the idea of a progressive account, following step by step the successive levels of being, is an integral part of Th.' positive appreciation of Plato's endeavours to explain the whole of the cosmos.

The step from the (ideal) numbers (**ἐκ δὲ τούτων**) to the principles of the One and the indefinite dyad involves a slight anacoluthon, in so far as the construction implies an intransitive verb (to go, to proceed) instead of ἀνάπτων εἰς ...

The syntactical structure and the position of **δόξειεν ἂν** in the sentence show that this rather noncommittal phrase concerns the precise way of proceeding in the first stage only; accordingly τὰ ἄλλα, although it suggests comprehensiveness, is not very specific.[1]

The sentence introduced by **εἶτα** outlines that particular part of Plato's intellectual activity that is more strictly speaking at issue in the present chapter and that makes him live up to our expectations of a philosopher: after having determined the ἀρχαί, he descends from these to account for the lower levels of being (6 a 15-8). As contrasted with 6 a 18 (μέχρι του προελθόντα) and 6 a 23 (μέχρι τινὸς ἐλθόντες) above, h.l. **μέχρι** apparently here does not involve a *regrettable* limitation; the idea apparently is that Plato does go down as far as one may reasonably be expected to go: **τῶν εἰρημένων** "the entities discussed", i.e., presumably, the objects of sense—the reference being the same as that of τῶν ἄλλων (6 b 12-3); see TARÁN (1981) 381 n.

As in the preceding clause, an intransitive verb of movement is implied. **κατὰ τὴν γένεσιν** implies a movement in the opposite direction, downwards

Ideen. Es gibt Ideen nur als zahlenmässig bestimmte." Cp. also RIST (1989) 69: "The conclusion would be that Forms are numbers as units, as the text of Theophrastus, when read carefully, also suggests." (but see next note). Cp. DE VOGEL (1949) 312.

[1] In any case, in view of Th.' idiom (or even: Greek idiom?) it is not very likely that we are to infer from δόξειεν ἂν that Plato *seems* to link everything together, but perhaps does not *really* do so, as RIST (1989) 67 believes.

along the scale of being, in contrast to ἀνάγειν, ἀνάπτειν above.[1] Cp. Arist. *PA* 646 a 24-7 ἐπεὶ δ' ἐναντίως ἐπὶ τῆς γενέσεως ἔχει καὶ τῆς οὐσίας· τὰ γὰρ ὕστερα τῇ γενέσει πρότερα τὴν φύσιν ἐστί, καὶ πρῶτον τὸ τῇ γενέσει τελευταῖον; also *Met.* 1077 b 28. For the idea of 'up' and 'down' in Plato's image of the divided line see *Resp.* 511 A 6-7 (ἀνωτέρω, κάτω; corresponding to ἐπ' ἀρχήν, ἐπὶ τέλευτήν, e.g. 510 B 6-7); also

> Plato *Resp.* 511 B 5-8 τὰς ὑποθέσεις ποιούμενος οὐκ ἀρχὰς ἀλλὰ τῷ ὄντι ὑποθέσεις, οἷον ἐπιβάσεις τε καὶ ὁρμάς, ἵνα μέχρι τοῦ ἀνυποθέτου ἐπὶ τὴν τοῦ παντὸς ἀρχὴν ἰών, ἁψάμενος αὐτῆς, πάλιν αὖ ἐχόμενος τῶν ἐκείνης ἐχομένων, οὕτως ἐπὶ τελευτὴν καταβαίνῃ, ...; compare
>
> Plut. *Quaest. Plat.* 1001 E τῶν εἰδῶν νόησιν ἐξ ἀφαιρέσεως καὶ περικοπῆς σώματος ἐπάγει (sc. ὁ Πλάτων), τῇ τῶν μαθημάτων τάξει καταβιβάζων.

A somewhat similar procedure may be recognized (in quite a different context) in Plato *Phaedr.* 265 D 3-4 εἰς μίαν τε ἰδέαν συνορῶντα ἄγειν τὰ πολλαχῇ διεσπαρμένα, cp. *ibid.* 265 E 1 πάλιν κατ' εἴδη δύνασθαι διατέμνειν.[2] See GUTHRIE V.130-1.

In view of the fact that the passage in *Resp.* focuses on (knowledge of) objects of thought in particular, the appreciation expressed by Th. is more likely to be based on the attention given to the physical world especially in the *Timaeus* (exemplifying a route downwards quite literally "following the order of generation").

An unspecified group of philosophers (**οἱ δέ**, "others": presumably still belonging to the adherents of the One and the indefinite dyad, mentioned as an example in 6 a 24 ff.) is finally contrasted with Plato: it is to these that the criticism in 6 a 23-4 fully applies.

The genitive **τῶν ἀρχῶν** suggests that ἅπτονται should be understood from ἅπτεσθαι, 6 b 12 above.[3] If, as is likely,[4] the 'others' are meant to include those referred to in 6 a 25 ff., the assertion that they treat of the principles only (**μόνον**) involves an evident exaggeration on the part of Th., probably in order to press the point he is making; see also περὶ τῶν πρώτων μόνον, 6 b 10-1.

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[1] Cp. USENER 's reading of κατάγων for MSS. κατά: "restitui contrarium verbo ἀνάγειν", (1890) *ad loc.*

[2] Cp. 266 B 4, 277 B 4 ff.

[3] Rather than δόξειεν ἂν ἅπτεσθαι (so L-M)—which is unlikely since, in view especially of ἐν τῷ ἀνάγειν εἰς τὰς ἀρχάς, δόξειεν ἂν appears to be firmly embedded in the context of Plato's procedure; see also above.

[4] Cp. CHERNISS (1947) 237 n. 78.

6 b 16-7 ἔνιοι δὲ ... περὶ τὰς ἀρχάς.

A next point (**δέ**), going further than (**καί**) the point made earlier concerning the limited scope of the explanation of the philosophers referred to, is that some (*of them*, it seems) go so far as to find truth in the principles (identifying use of **ἐν**: see e.g. 4 a 17-8 ἐν ποίοις, 4 b 9-10 ἐν ὀλίγοις ... καὶ περιττοῖς). For the neuter ἐν **τούτοις** = ἐν ταῖς ἀρχαῖς cp. ἐν ἐκείνοις = ἐν ταῖς ἄλλαις μεθόδοις 6 b 19. The construction is almost a brachylogy and presupposes a suppletion like εἶναί (φασι): cp. 7 a 19 τὰς δ' ἀρχὰς ἀορίστους εἶναι.

The restriction of truth to the principles is understandable since—or, more objectively, due to the fact that: **γάρ**—for these philosophers *reality* is to be found in the principles only; for the parallelism of being and truth (or, knowledge) see *ad* ἀτακτοτέρα 4 a 4. **τὰ ὄντα** "reality", i.e. that which εἶναι can be predicated of, and which is the domain of truth, its extension varying according to the context in which it occurs: see 6 a 11, 11 a 25, 12 a 2; also

> Arist. *Met.* 983 b 1-3 παραλάβωμεν καὶ τοὺς πρότερον ἡμῶν εἰς ἐπίσκεψιν τῶν ὄντων ἐλθόντας καὶ φιλοσοφήσαντας περὶ τῆς ἀληθείας.
>
> 1010 a 1-3 αἴτιον δὲ τῆς δόξης τούτοις ὅτι περὶ τῶν ὄντων μὲν τὴν ἀλήθειαν ἐσκόπουν, τὰ δ' ὄντα ὑπέλαβον εἶναι τὰ αἰσθητὰ μόνον· ...
>
> 1060 a 7-10 καὶ γὰρ ὅλως ἀπορίαν ἔχει πότερον δεῖ τινὰ ὑπολαβεῖν οὐσίαν εἶναι χωριστὴν παρὰ τὰς αἰσθητὰς οὐσίας καὶ τὰς δεῦρο, ἢ οὔ, ἀλλὰ ταῦτ' εἶναι τὰ ὄντα καὶ περὶ ταῦτα τὴν σοφίαν ὑπάρχειν.

For the use of περί + acc. as an equivalent of ἐν, see *ad* 6 b 8.

μόνον in this position qualifies the (implicit) verbal component ("is (to be found) only in ...", cp. 7 a 7 οἱ δὲ μόνον (sc. εἶναί φασι) τὰς ὑλικάς), thus emphasizing the coextensiveness of both domains.[1]

If only because the present context apparently still deals with the adherents of the One and the indefinite dyad (see above), it is quite unlikely that this remark is meant to apply to Aristotle, as REALE (*ad loc.*) suggests, referring to *Met.* α 993 b 23 ff. οὐκ ἴσμεν τὸ ἀληθὲς ἄνευ τῆς αἰτίας κ.τ.λ. As a matter of fact, the same passage shows that Aristotle does assume different degrees (or, modes) in our knowledge of reality (ὥστε καὶ ἀληθέστατον ⟨ἀεὶ⟩ τὸ τοῖς ὑστέροις αἴτιον τοῦ ἀληθέσιν εἶναι 993 b 26-7, διὸ τὰς τῶν ἀεὶ ὄντων ἀρχὰς ἀναγκαῖον εἶναι ἀληθεστάτας 993 b 28-9). For the persons Th. is referring to, however, truth, reality and ἀρχαί are coextensive.

It is even more unlikely that Th. himself would have sympathized with the intellectual attitude here referred to (REALE, note 19 *ad loc.*): there is no antithesis

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[1] Rather than qualifying περὶ τὰς ἀρχάς ("is (to be found) in ... only"), as *is* the case in οἱ δὲ τῶν ἀρχῶν μόνον 6 b 15-6, ἐν δὲ τοῖς μαθηματικοῖς μόνον τὰ νοητά 4 a 18-9, and Arist. *Met.* 1010 a 3, quoted above.

presenting "the opposite positions of those who did not make the deduction and those who held that metaphysics must consist solely in a consideration of the principles" (as REALE, in CATAN's translation, puts it); rather, some (of them, presumably: see above), *in addition to* failing to make the deduction, go so far as to deny any ontological & epistemological value to anything but the principles themselves.

III.3 (6 b 17-22) *The attention paid in philosophy to what comes after the principles contrasts with that in the other sciences; not surprisingly so, considering that philosophy is trying to find the principles, whereas the other sciences start from the principles (those underlying the object or product of the science in question).*

6 b 17-20 συμβαίνει δὲ ... τῶν ἐπιστημῶν.

Th. adds (**δέ**) the observation that the situation in philosophy is the opposite of that in the other sciences. The paragraph—apparently inspired by the extremely high rating of the principles by the philosophers referred to in the previous paragraph—tends to show that the expectation expressed in the beginning of this chapter, that one should go on, after having identified the principles, to explain the lower levels of being, conflicts with the usual demarcation between the sciences. At the same time it prompts the transition to the discussion of elementary principles in the next chapter (see next note).

For the use of **συμβαίνει** to denote what is actually the case see *ad* 5 b 23-4. In view of the immediate context **ἐν ταῖς ἄλλαις μεθόδοις**[1] is likely, to say the least, to include the study of natural entities (*contra* R-F, TRICOT, who assume that the mathematical sciences are meant in particular), and possibly the productive sciences as well (cp. 7 a 4-6).

In the realm of the natural sciences (for the gender of ἐν ἐκείνοις, cp. ἐν τούτοις 6 b 16-7) the part of the sciences that comes after the principles is the stronger (**ἰσχυρότερα**), and 'more complete' (**τελεώτερα**) part, because the objects of sense are capable of independent existence,[2] and constitute the most complete realization of the natural (or, technical) potential.

The placing in the sentence of the (partitive) genetive τῶν ἐπιστημῶν seems to show that it depends on (an implied μέρη going with) the compar-

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[1] (...) μέθοδος perinde ac πραγματεία usurpatur ad significandam aliquam disciplinam ac doctrinam ... numerus plur μέθοδοι apud Ar legitur de pluribus disciplinis, BONITZ 450 a 22-3, 28-9 s.v.)

[2] Cp. *CP* III.5.3 ἰσχυρότερα γὰρ καὶ ὥσπερ ἤδη βεβιωκότα, of slips already having roots.

atives rather than on τὰ μετὰ τὰς ἀρχάς: *contra* R-F, L-M.[1] For the combination of τέλεος and ἰσχυρός (in a different context), compare

> *CP* I.16.3 τὸ δὲ σπέρμα πάντων (sc. parts of the fruit) ἰσχυρότατον, κοινὸν γὰρ τέλος πάντων τῶν φυτῶν ἐστιν, ἐπείπερ ἡ τοῦ ὁμοίου γένεσις τέλος, ἅμα δὲ καὶ ἐν τοῖς ζῴοις δοκεῖ τελειουμένης ἐπιγίνεσθαι τῆς φύσεως, ..., where the seed is imagined to be the 'final product' of a plant; cp. the description of semen as consisting of *both* male and female (representing form and matter respectively) in Arist. *GA* 716 a 10, 726 a 26 ff.

In the present treatise too, what comprises both matter and form, both the general and the particular, is extolled for its 'completeness' or τελειότης: see 8 b 24-7 (also 7 a 7-9); cp. τέλεος in 6 a 19 expressing the corresponding human attitude.

In the present passage the parallelism between knowledge and the objects of knowledge is, in fact, carried through to such an extent that the *entities* coming after the principles are actually indicated as (the stronger) *part of the sciences* (cp. *ad* 4 a 3-5). The fact that οἷον (for which see *ad* 4 a 10) is added seems to indicate that the use of τέλεος with reference to a part of a science (cp. τέλεος δ' ἡ ἐξ ἀμφοῖν, sc. ἐπιστήμη, 8 b 27) is secondary as compared with that with reference to the objects of knowledge. For the use of ἰσχυρός in an epistemological context, see e.g. Ps.-Arist. *Physiogn.* 806 b 34 of σημεῖα, *Rhet. ad Alex.* 1432 a 16 of a βάσανος (corr. πιστός).

For the phrase **τὰ μετὰ τὰς ἀρχάς** cp. Speus. Fr. 73 Tarán: δεῖ γὰρ δὴ πανταχοῦ τὰς ἀρχὰς τῶν μετὰ τὰς ἀρχὰς διαφέρειν τῇ ἁπλότητι, τῷ ἀναποδείκτῳ, τῷ αὐτοπίστῳ; in the sciences involved the things coming after the ultimate principles (i.e. the particulars) consist of both matter and form, and are thus neither ἁπλοῦς nor ἀναπόδεικτον nor αὐτόπιστον. In the present context, however, it seems more likely that the ἀρχαί meant are the elementary principles rather: see also next note. If this is true, L-M' reference (*ad loc.*) to Aristotle's rejection of a similar point of view (of Speusippus) in Arist. *Met.* is relevant indeed:

> Arist. *Met.* 1092 a 11-7 οὐκ ὀρθῶς δ' ὑπολαμβάνει οὐδ' εἴ τις παρεικάζει τὰς τοῦ ὅλου ἀρχὰς τῇ τῶν ζῴων καὶ φυτῶν, ὅτι ἐξ ἀορίστων ἀτελῶν τε ἀεὶ τὰ τελειότερα, διὸ καὶ ἐπὶ τῶν πρώτων οὕτως ἔχειν φησίν, ὥστε μηδὲ ὄν τι εἶναι τὸ ἓν αὐτό. *εἰσὶ γὰρ καὶ ἐνταῦθα τέλειαι αἱ ἀρχαὶ ἐξ ὧν ταῦτα· ἄνθρωπος γὰρ ἄνθρωπον γεννᾷ, καὶ οὐκ ἔστι τὸ σπέρμα πρῶτον.*

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[1] "Il semble exclu par le sens que le génitif τῶν ἐπιστημῶν puisse dépendre des comparatifs. Nous en faisons un partitif, en le rattachant ... à τὰ μετὰ τὰς ἀρχάς, en dépit de la rudesse du rejet (il pourrait aussi dépendre du démonstratif, si l'on corrige ἐκείνοις en ἐκείναις ...)", L-M *ad loc.*

—where it appears, I think, that Aristotle denies the (elementary) principles of nature the status of ἀρχή in the proper sense of the word in order to conform to the requirements of a consistently teleological explanation of the cosmos. To Th., however, the elementary principles are principles no less than the 'first', ultimate principles, both kinds of principles being equally necessary to the totality of being. (See Introduction, p. 29-30.)

The situation prevalent in the other disciplines is adduced in explanation (γάρ) of a contrast in situation (τοὐναντίον); συμβαίνει, therefore, refers to the situation prevalent in the present discipline (philosophy, the science of the principles), where what comes after the principles is weaker & less complete, and the ἀρχαί themselves constitute the stronger & more complete part (for ἰσχυρός said of a (first) principle itself, see 5 b 15 with note). See also ἔνθα ... τῶν ἀρχῶν 6 b 21, below.

For the contrast, cp. 8 b 27 – 9 a 4: ἔστιν δ' ἔνια, ὧν καθόλου τέλος—ἐν τούτῳ γὰρ τὸ αἴτιον—, τῶν δὲ τὸ ἐν μέρει, καθ' ὅσα διαίρεσις εἰς τὰ ἄτομα, καθάπερ ἐν τοῖς πρακτοῖς καὶ ποιητοῖς· οὕτως γὰρ αὐτῶν ἡ ἐνέργεια (with commentary, p. 417 ff.).

6 b 20-2 τάχα δὲ ... ἡ ζήτησις.

Th. adds that the opposition between philosophy and the other disciplines on the point of the value of the principles (see preceding note) perhaps (**τάχα**) was also reasonably to be expected (**εὐλόγως**—for which see *ad* 4 a 13—adds to συμβαίνει the observer's perspective: hence **καί**), in view of the fact that (**γάρ**) the role of the principles themselves shows a corresponding opposition: in philosophy (**ἔνθα**: the present science, metaphysics, the study of the principles: ἡ ὑπὲρ τῶν πρώτων θεωρία, 4 a 2-3), the principles are *the objects* of investigation (**τῶν ἀρχῶν** sc. ἡ ζήτησις),[1] whereas in the other disciplines (ἐν ταῖς λοιπαῖς, sc. μεθόδοις, see 6 b 18; or, sciences: ἐπιστήμαις, see 6 b 20) they constitute *the point of departure*. One may compare, in a quite different context,

> *CP* VI.6.9 (Th. is discussing two types of production of flavour: φαίνεται διττή τις ἡ γένεσις εἶναι τῶν χυλῶν, ἑκατέρα κατὰ τὰς ὑποκειμένας φύσεις· ἡ μὲν γὰρ ἐξ ἀπέπτων καὶ πλειόνων μεταβάλλουσα πρὸς τὴν τελέωσιν, ἡ δέ, ὥσπερ ἄχυλος καὶ ἀειδής, ἐν ἁπλῇ τινι γενέσει καὶ ἀλλοιώσει, διὰ τὴν ὑποκειμένην φύσιν. (VI.6.7) ...) ᾗ καὶ δόξειεν ἂν ἐναντίως καὶ ἐπὶ τῶν ἄλλων· ἐν μὲν γὰρ τοῖς ἄλλοις ἐκ μίξεως ἡ γένεσις, ἐνταῦθα δ' ὥσπερ ἐξ ἀφαι-

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[1] Cp. Plato *Tht.* 196 D 8 ζήτησις ... ἐπιστήμης; Thuc. 1.20.3 ἡ ζήτησις τῆς ἀληθείας, but also, more concretely, *ibid.* VIII.66.2 τῶν δρασάντων οὔτε ζήτησις οὔτ' εἰ ὑποπτεύοιντο δικαίωσις ἐγίγνετο.

ῥέσεως καὶ χωρισμοῦ· *καὶ ἔνθα μὲν ἐκ τῶν ἀρχῶν, ἔνθα δ' αὐτῆς τῆς ἀρχῆς*[1] (ἀρχὴ γὰρ τὸ γλυκύ, τούτου δ' ἡ πέψις ὡς ἁπλῶς εἰπεῖν).

Since Th. apparently is describing what happens in actual practice (see συμβαίνει, 6 b 17-8), it is unlikely that the ἀρχαί referred to in **ἀπὸ τῶν ἀρχῶν** are the 'first' principles (see also *ad* τῶν ἀρχῶν, 6 b 21). For in that case it would be common practice for all physical (and technical) scientists to be accomplished philosophers as well (to put it differently, philosophy would be a veritable propaedeusis): this would mean that each & every scientist would be supposed to have made up his mind about the objects of metaphysics before turning to his proper object of enquiry.[2]

Accordingly, the present passage apparently is not concerned with the difference between inductive an deductive knowledge, as in Arist. *EN* 1139 b 27-31 ἡ μὲν γὰρ δι' ἐπαγωγῆς (sc. ἐπιστήμη), ἡ δὲ συλλογισμῷ. ἡ μὲν ἐπαγωγὴ ἀρχή ἐστι καὶ τοῦ καθόλου, ὁ δὲ συλλογισμὸς ἐκ τῶν καθόλου· εἰσὶν ἄρα ἀρχαὶ ἐξ ὧν ὁ συλλογισμός, ὧν οὐκ ἔστι συλλογισμός· ἐπαγωγὴ ἄρα.; nor does the present distinction, then, coincide with that between what is absolutely more intelligible and what is more intelligible to us; cp. *EN* 1095 a 32 ff.—of which, according to R-F (*ad loc.*), Th.' passage is "a reminiscence" (see also EVANS (1977) 52, 70-1).

The present paragraph, in which the attitude of the metaphysician is contrasted with that of, e.g., natural scientists, can even less be related to Plato *Resp.* 511 a 3 – D 5, the opposition there being between 'dialectic' and 'mathematics', neither one of which is concerned with (the objects of) sense perception in the first place (511 C 1, C 7-8).[3]

Now it seems to be very much open to question whether persons who have gone all the way in search for the first principles, would conceive objects of physics (or, for that matter, artificial products) to be "stronger and more complete" than the ultimate (noetic, unmoved, eternal) principles.[4]

This being so, αἱ ἀρχαί could refer either (i) to the objects of sense (cp. 9 b 6-9) or (ii) to the even more fundamental elementary principles, the idea being that, if the latter are known, they are the starting-points for the study of

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[1] "and there the primary flavours are the sources, whereas here the primary flavour is the result", tr. EINARSON/LINK.

[2] This is what Aristotle in fact expects from those who are endowed with unqualified σοφία: cp. the contrast between those having σοφία with respect to some τέχνη as opposed to those who are σοφοὶ ὅλως in *EN* 1141 a 9 ff.; about the latter group he says (1141 a 17-20): δεῖ ἄρα τὸν σοφὸν μὴ μόνον τὰ ἐκ τῶν ἀρχῶν εἰδέναι, ἀλλὰ καὶ περὶ τὰς ἀρχὰς ἀληθεύειν. ὥστ' εἴη ἂν ἡ σοφία νοῦς (this being what solely has apprehension of αἱ ἀρχαί: 1141 a 8) καὶ ἐπιστήμη, ὥσπερ κεφαλὴν ἔχουσα ἐπιστήμη τῶν τιμιωτάτων.

[3] *Contra* R-F *ad loc.* See also *ad* 6 b 11-5 above.

[4] Cp. perhaps Plato *Resp.* 511 A 7-8 ὡς ἐναργέσι δεδοξασμένοις τε καὶ τετιμημένοις, presumably of (visible) mathematical figures & models as compared with forms of, or to be observed in, natural entities.

nature (although, if they are unknown, the phenomena themselves will in actual practice be the starting-point). For the step leading from (i) to (ii) see

143 FHS&G (= Simpl. *In Phys.* 184 a 16) ὅλως δὲ ὡς κοινῶς εἰπεῖν ἀπὸ τῶν αἰσθήσεων καὶ τῶν αἰσθητῶν τὴν περὶ τῶν φυσικῶν ἀρχῶν ἀλήθειαν ἀνιχνευτέον καὶ Θεοφράστῳ πειθομένοις, ὃς περὶ τούτου ζητῶν ἐν πρώτῳ Φυσικῶν τάδε γέγραφεν· "ἐπεὶ δὲ οὐκ ἄνευ μὲν κινήσεως οὐδὲ περὶ ἑνὸς λεκτέον (πάντα γὰρ ἐν κινήσει τὰ τῆς φύσεως), ἄνευ δὲ ἀλλοιωτικῆς καὶ παθητικῆς οὐχ ὑπὲρ τῶν περὶ τὸ μέσον, εἰς ταὐτά τε καὶ περὶ τούτων λέγοντας οὐχ οἷόν τε καταλιπεῖν *τὴν αἴσθησιν, ἀλλ' ἀπὸ ταύτης ἀρχομένους πειρᾶσθαι χρὴ θεωρεῖν, ἢ τὰ φαινόμενα λαμβάνοντας καθ' αὑτὰ ἢ ἀπὸ τούτων εἴ τινες ἄρα*[1] *κυριώτεραι καὶ πρότεραι τούτων ἀρχαί.*"[2]

For the drift of this passage, cp.

HP I.2.1 ἄλλα δὲ ἐξ ὧν ταῦτα, φλοιὸς ξύλον μήτρα, ὅσα ἔχει μήτραν. πάντα δ' ὁμοιομερῆ. *καὶ τὰ τούτων δὲ ἔτι πρότερα καὶ ἐξ ὧν ταῦτα,* ὑγρὸν ἶς φλὲψ *σάρξ· ἀρχαὶ γὰρ αὗται—πλὴν εἴ τις λέγοι τὰς τῶν στοιχείων δυνάμεις*—[3] αὗται δὲ κοιναὶ πάντων. ἡ μὲν οὖν οὐσία καὶ ἡ ὅλη φύσις ἐν τούτοις.

Relevant in this connection is Th.' interpretation of the proem of Aristotle's *Physics*, where Aristotle argues that the starting-point of natural science consists in the observation of τὰ γνωριμώτερα ἡμῖν (or, κατὰ τὴν αἴσθησιν)—that is, the particular entities—, in order to recognize τὰ γνωριμώτερα τῇ φύσει (or, ἁπλῶς)—that is, the elements and principles. This passage caused a problem in so far as on the basis of the Aristotelian system one would rather have expected the search for the principles to belong to the domain of metaphysics: see e.g. Porph. *ap.* Simpl. 9.11 ff.[4]

Both Philoponus and Simplicius supply evidence as to Th.' way of solving this problem: what Aristotle really said—or should have said—is that knowledge of the particular *presupposes* knowledge of the elements and of the principles which are the constituent parts of these composite entities.

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[1] For the use of εἰ (...) ἄρα introducing a possibility which is *de facto* to be reckoned with, cp. 9 a 6; also εἰ μὴ ἄρα 5 b 28, 6 a 10; *CP* VI.6.10, p. 283 below.

[2] Steinmetz (1964) 149 n.1 rightly observes that the following sentence καὶ κάλλιον οἶμαι τοιοῦτόν τινα τρόπον τὴν ἀπὸ τῶν ἡμῖν γνωριμωτέρων ἐπίβασιν γίνεσθαι conveys Simplicius' opinion rather than that of Th.

[3] I submit that this parenthesis should be interpreted as meaning "unless one would rather designate <as principles> the powers of the elements", *contra* Hort "unless one should prefer to call them the active principles of the elements", Amigues "à moins qu'on ne les appelle les principes de base"—these 'powers' being τὸ ὑγρόν and τὸ θερμόν (as well as, presumably, τὸ ξηρόν, τὸ ψυχρόν), referred to as τὰ πρῶτα in the sequel (I.2.4: ἐξ ὧν γὰρ καὶ ταῦτα (such parts as stem, root) καὶ τὰ ἄλλα σύγκειται πειρατέον εἰπεῖν *ἀρξαμένους ἀπὸ τῶν πρώτων.* πρῶτα δέ ἐστι τὸ ὑγρὸν καὶ θερμόν· κ.τ.λ.).

[4] See Fritsche (1986) 19 ff.

144A.1-4, 29-36 FHS&G (= Philop. *In Phys.* 184 a 10 ff.) ὁ μὲν οὖν Ἀριστοτέλης οὕτως, Θεόφραστος δὲ καὶ ὅλον τὸν συλλογισμὸν ἔθηκεν ἐν τῇ ἰδίᾳ Περὶ φύσεως πραγματείᾳ, παραμυθίας τινὸς ἀξιώσας καὶ τὴν ἐλάττονα πρότασιν τὴν *ὅτιπερ τῆς φυσιολογίας εἰσὶν ἀρχαὶ καὶ αἴτια καὶ στοιχεῖα.* τοῦτο γὰρ οὐ πρόδηλον. ... (29) εἰ τοίνυν τὰ φυσικὰ πράγματα ἢ σώματά ἐστιν ἢ ἐν σώματι τὸ εἶναι ἔχει, ταῦτα δὲ σύνθετα· τὰ φυσικὰ ἄρα πράγματα σύνθετά ἐστι. πάντα δὲ τὰ σύνθετα στοιχεῖα καὶ αἴτια καὶ ἀρχὰς ἔχει· τὰ γὰρ ἁπλᾶ τοῦ συνθέτου ἐστὶ στοιχεῖα· τὰ φυσικὰ ἄρα πράγματα ἀρχὰς καὶ αἴτια καὶ στοιχεῖα ἔχει. οὕτω μὲν οὖν τὴν ἐλάττονα κατεσκεύασε πρότασιν· ἢ προσθεὶς τὴν μείζονα, ὅτι *πᾶν ὃ ἔχει ἀρχὰς ἢ αἴτια ἢ στοιχεῖα γινώσκεται τούτων ἐγνωσμένων,* οὕτω συνάγει ὅτι *τὰ φυσικὰ ἄρα πράγματα γινώσκεται τῶν ἀρχῶν ἐγνωσμένων.*

In the passage quoted below one might recognize a description of the (preliminary) stage, in which knowledge of the basic principles has to be acquired through studying their consequent effects:

CP I.21.4 τούτων δὲ τὰ μὲν ἄλλα σχεδὸν τῇ αἰσθήσει φανερόν· τὸ δὲ θερμὸν καὶ ψυχρόν, ἐπείπερ οὐκ εἰς αἴσθησιν ἀλλ' εἰς λόγον ἀνήκει, διαμφισβητεῖται καὶ ἀντιλέγεται, καθάπερ τὰ ἄλλα τὰ τῷ λόγῳ κρινόμενα· *περὶ ὧν καλῶς ἔχει διωρίσθαι πως, ἄλλως (τ') ἐπεὶ καὶ πολλὰ πρὸς ταύτας ἀνάγεται τὰς ἀρχάς. ἀνάγκη δὲ* ἐκ τῶν συμβεβηκότων ἅπαντα τὰ τοιαῦτα σκοπεῖν, ἐκ τούτων γὰρ κρίνομεν καὶ θεωροῦμεν τὰς δυνάμεις.

The idea thus seems to be that the difference in appreciation of the ἀρχαί in philosophy as compared with the other disciplines is in accordance with the difference in position of the ἀρχαί: in philosophy/metaphysics the principles (i.e., the 'first', noetic principles) actually constitute the object of study, whereas in the other disciplines the principles (i.e., the elementary powers of τὸ ὑγρόν and τὸ θερμόν <and their opposites>) are merely the basic constituents requisite to our understanding (or, the production) of the composite natural (or, artificial) entities.

Owing to its generic nature,[1] the term ἀρχή naturally allows of this—admittedly rather confusing—polar statement. Anaximander may have been the first to use ἀρχή with reference to the material cause (See Simplicius *In Phys.* 184 b 15, 226A.1-4 FHS&G; cp. also *In Phys.* 187 a 21, 228B FHS&G). In Plato *Tim.* 48 B 7-8 the term ἀρχαί is used with reference to the elements (ἀρχὰς αὐτὰ τιθέμενοι στοιχεῖα τοῦ παντός); according to TAYLOR, however, in this case ἀρχαί should be interpreted as meaning "in the simplest sense, 'beginnings', 'starting-points' (of a λόγος περὶ φύ-

[1] Cp. SCHWABE (1980) 60-4.

σεως)", *ad loc.*[1] We are on firm ground at any rate with Aristotelian expressions like αἱ ἐν ὕλης εἴδει ... ἀρχαί *Met.* 983 b 7; ἡ ὑλικὴ ἀρχή *PA* 640 b 5, *GA* 762 b 1.

In a quite different context, Th. shows himself to be aware of the fact that the curious situation of ἀρχαί being conceived of now as a source, now as the result of a process, may be accounted for by the fact that the term is used in more than one sense: see

> *CP* VI.6.9-10 ᾗ καὶ δόξειεν ἂν *ἐναντίως* καὶ[2] ἐπὶ τῶν ἄλλων (sc. χυλῶν, flavours)· *ἐν μὲν γὰρ τοῖς ἄλλοις* ἐκ μίξεως ἡ γένεσις, *ἐνταῦθα δ'* ὥσπερ ἐξ ἀφαιρέσεως καὶ χωρισμοῦ· καὶ *ἔνθα μὲν ἐκ τῶν ἀρχῶν, ἔνθα δ' αὐτῆς τῆς ἀρχῆς* (ἀρχὴ γὰρ τὸ γλυκύ, τούτου δ' ἡ πέψις ὡς ἁπλῶς εἰπεῖν).
>
> (10) ἀλλὰ ταῦτα μὲν ἴσως ἄλλην τινὰ ἔχει θεωρίαν· ἐπεὶ κἀκεῖνο ἄτοπον, εἰ οἱ χυλοὶ πάντες ἐκ τοῦ πικροῦ καὶ γλυκέος μιγνυμένων, ὥσπερ ἐκ τῶν στοιχείων τὰ σώματα· πάλιν δ' αὖ θάτερον, εἰ ἐκ μὲν τούτων μηδέν, ταῦτα δ' ἐκ τῶν ἄλλων, οὐ γὰρ ἀρχῶν ἡ τοιαύτη φύσις. *εἰ μὴ ἄρα πλεοναχῶς αἱ ἀρχαὶ καὶ κατὰ πλείους τρόπους*, ὅπερ ἔοικεν, ὥσπερ κατὰ συστοιχίαν ἐνίων λεγομένων.

The last paragraph of this chapter thus seems to bear upon the main issue of the treatise: Th.' plea for an attitude which would cause a philosopher/metaphysician *not* to stop (too soon) after having identified the principles, ends in an observation as to the situation which is prevalent in the sciences. The value philosophers attach to the principles contrasts with that in the other sciences—not surprisingly so (εὐλόγως): as it is, philosophy concentrates upon principles, the other sciences are concerned with the products of the principles (which underlie things of nature & art). This situation explains what from Th.' point of view is wrong with the attitude of his colleagues : *if one takes into account the division of scientific exploration into separate disciplines*, one should not be surprised if philosophers tend to neglect the explanation of the other entities as parts of the whole.[3] For Th.' distancing

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[1] The (rejected) analogy with syllables, however, does not seem to support this view.

[2] ᾗ καὶ Schneider; ἡ Moreliana.

[3] *Contra* L-M "Paradoxalement, Théophraste conclut ce paragraphe sur la dérivation à partir des principes en suggérant qu'il pourrait y avoir quelque justesse tant dans la position extrême selon laquelle la vérité et la réalité se trouvent seulement dans les principes (...), que dans celles qui ne font aucune tentative sérieuse de dériver les choses au-delà d'un certain point" (*ad loc.*). Also *contra* SENN (1933) 108 *ad loc.*: "In Folge [der] Unzulänglichkeit unserer Sinnesorgane hält [Th.] die Wissenschaft von denjenigen Gebieten, welche erst *nach* den Urdingen, den ἀρχαί kommen, d.h. zunächst die Mathematik, für zuverlässiger, als die Wissenschaft von den Urdingen, d.h. als die Metaphysik ... Also wiederum unverhohlener Zweifel an der Zuverlässigkeit der ausschliesslich mit dem denkenden Verstande, dem λόγος, gewonnenen Resultate, und Zuwendung zum Studium der Realien!".

himself from this situation,[1] see esp. I.1 πῶς ἀφορίσαι δεῖ ... τὴν ὑπὲρ τῶν πρώτων θεωρία (κ.τ.λ.), and IX.4 (τῆς τοῦ σύμπαντος θεωρίας, 12 a 1) with commentary. Also Introduction pp. 11-2.

[1] Th.' interest in such matters, to say the least, is testified by 224.1-10 FHS&G (= Simpl. *In Phys.* 184 b 15): ἀνάγκη τοίνυν τὴν ἀρχὴν ἢ μίαν εἶναι ἢ οὐ μίαν, ταὐτὸν δὲ εἰπεῖν πλείους, καὶ εἰ μίαν, ἤτοι ἀκίνητον ἢ κινουμένην· καὶ εἰ ἀκίνητον ἤτοι ἄπειρον, ὡς Μέλισσος ὁ Σάμιος δοκεῖ λέγειν, ἢ πεπερασμένην, ὡς Παρμενίδης Πύρητος Ἐλεάτης, *οὐ περὶ φυσικοῦ στοιχείου λέγοντες οὗτοι, ἀλλὰ περὶ τοῦ ὄντος ὅλως*. μίαν δὲ τὴν ἀρχὴν ἤτοι ἓν τὸ ὂν καὶ πᾶν καὶ οὔτε πεπερασμένον οὔτε ἄπειρον οὔτε κινούμενον οὔτε ἠρεμοῦν Ξενοφάνην τὸν Κολοφώνιον τὸν Παρμενίδου διδάσκαλον ὑποτίθεσθαί φησιν ὁ Θεόφραστος *ὁμολογῶν ἑτέρας εἶναι μᾶλλον ἢ τῆς περὶ φύσεως ἱστορίας τὴν μνήμην τῆς τούτου δόξης*. Cp. also 10 a 7-9 καὶ γὰρ δὴ καὶ ὁ τρόπος, ὡς οἴονταί τινες, οὐ φυσικὸς (ἢ οὐ πᾶς).

CHAPTER FOUR

IV.1 (6 b 23 – 7 a 6): *One might ask whether the <elementary> principles are endowed with shape or not. If the elements are veritable ἀρχαί, they are also the most valuable of things, which would make it proper that they should involve shape as well. Taking into account the situation in the other sciences and in the arts, too, it is likely that a certain definiteness is involved. The fact that the things of nature have shape offers an argument in favour of a certain definiteness for the elementary principles too.*

6 b 23-8 πῶς δέ ποτε ... τὸ ὡρίσθαι.

For **χρή** + inf. aoristi see *ad* 4 a 2. As in the beginning of the treatise, **πῶς** introduces the more general question (in what way one should conceive of the principles: **ὑποθέσθαι** sc. εἶναι),[1] and **καὶ ποίας** adds the specification that the question particularly concerns the nature of the principles (possibly as opposed to their number);[2] it will appear that the choice here is one between *plus* or *minus* shape: ἀμόρφους (& δυναμικάς) vs. μεμορφωμένας (below). For πῶς **ποτε** introducing a fundamental question, see *ad* 5 a 24.

As can be inferred from the following theoretical disjunction, these **ἀρχαί** are the elementary, 'basic' (or, 'internal') principles (in Aristotelian terms, τὰ ἐνυπάρχοντα αἴτια, *Met.* 1070 b 22), rather than the immaterial, allegedly unmoved first principles discussed in Chh. I-III.2 (see *ad* III.3); Th. will return to the question of the latter kind ("ὅθεν δὴ καὶ ὁ πρῶτος λόγος") in 7 b 9.[3]

The first of these theoretical possibilities (as opposed to the 'doxographical positions' discussed in 7 a 6 ff.) is that the principles are shapeless (**ἀμόρφους**) and (what one could call) 'full of potential'. The word **δυναμικός** (either "fit for exercising power", "potent" (cp. τυραννικός), or "in the manner of, according to δύναμις" (cp. φυσικός)[4] is not unequivocally attested

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[1] Cp. 11 b 22-3.

[2] Cp. Arist. *Met.* 988 a 23-5 οἱ μὲν γὰρ ὡς ὕλην τὴν ἀρχὴν λέγουσιν, ἄν τε μίαν ἄν τε πλείους ὑποθῶσι, ...

[3] Cp. 169 FHS&G (= Simpl. *in De Caelo* 1.8-10): καὶ τὸν Θεόφραστον δὲ μαρτύρεται (sc. Alexander) ἐν τῷ Περὶ οὐρανοῦ μὴ περὶ τοῦ θείου σώματος λέγοντα μόνον, ἀλλὰ καὶ περὶ τῶν ἐν γενέσει καὶ *περὶ τῶν τοιούτων ἀρχῶν*. STEINMETZ (1964) 160.

[4] See JAEGER (1938) 20, cited *ad* τὰ κυκλικά 5 a 16, p. 166 above.

before Th.[1] οἷον possibly is meant to indicate that Th. is aware that he is extending the application of δύναμις, or even that he is coining a new technical term; the advantage would in either case be that the term can be made to apply both to the character-powers inherent in the ἀρχαί of the physiologists and to the Aristotelian notion of the material principle as τὸ δυνάμει ὄν.

The relation between ἀμόρφους and δυναμικάς (and, by the same token, the value of **καί**), it should be noted, differs according as the latter term is interpreted: the relation may involve a contrast (formless, *but* fit for exercising power), as well as a specification in terms of Aristotelian metaphysics (formless, i.e., in the manner of potentiality).

This first possibility is instanced by the view of **ὅσοι πῦρ καὶ γῆν** sc. λέγουσιν (or the like); whom Th. is referring to is not beyond dispute. To begin with, there is no testimony of an adherent of the principle of earth[2] similarly to Heraclitus' principle of fire; furthermore the use of καί—in order to avoid being ambiguous Th. might have said πῦρ ἢ γῆν—strongly suggests that Th. is thinking of a single theory assuming both principles, rather than of different theories assuming either one of them as a single principle.[3]

Now, in the fragments of Parmenides we find Parmenides putting forward this theory[4] merely to refute it as a false opinion (see B 8.51 ff. DK), and yet Peripatetic doxography is unanimous in attributing to Parmenides the principles of "fire and earth": see Arist. *GC* 318 b 6-7 ὥσπερ Παρμενίδης λέγει δύο τὸ ὂν καὶ τὸ μὴ ὂν εἶναι φάσκων πῦρ καὶ γῆν (cp. 330 b 14; *Met.* 986 b 34); cp. also 227C FHS&G (= Alex. Aphr. *In Met.* 984 b 3-4), where Th. is reported to say that Parmenides, for the purpose of explaining the coming-to-be of τὰ φαινόμενα, makes the principles two in number: fire and earth, the one (the latter) as matter, the other as cause and agent (εἰς τὸ γένεσιν ἀποδοῦναι τῶν φαινομένων δύο ποιῶν τὰς ἀρχάς, πῦρ καὶ γῆν, τὸ μὲν ὡς ὕλην τὸ δ' ὡς αἴτιον καὶ ποιοῦν, 227C.7-9); see also 227D (= D.L. IX.21-2): (Parmenides holds that) δύο ... εἶναι στοιχεῖα, πῦρ καὶ γῆν, καὶ τὸ μὲν δημιουργοῦ τάξιν ἔχειν, τὴν δ' ὕλης (227D.4-5).

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[1] See however Ps.-Philolaos, B 21.9-10 DK οὔτε γὰρ ἔντοσθεν ἄλλα τις αἰτία δυναμικωτέρα αὐτᾶς εὑρεθήσεται. For adjectives ending in -ικός occurring for the first time in Th.' botanical treatises see HINDENLANG (1910) 167.

[2] Cp. Arist. *DA* 405 b 8-10 πάντα γὰρ τὰ στοιχεῖα κριτὴν εἴληφε, πλὴν τῆς γῆς· ταύτην δ' οὐθεὶς ἀποπέφανται, πλὴν εἴ τις αὐτὴν εἴρηκεν ἐκ πάντων εἶναι τῶν στοιχείων ἢ πάντα; also *Met.* 989 a 5-6 οὐθεὶς γοῦν ἠξίωσε τῶν ἐν λεγόντων γῆν εἶναι στοιχεῖον, δηλονότι διὰ τὴν μεγαλομέρειαν, ...; as to the different tale told in Arist. *Phys.* 193 a 21 (οἱ δὲ γῆν ... φασίν), see MANSFELD (1987) 294: "Xenophanes is of course the only plausible, or even possible, candidate".

[3] Cp. R-F *ad loc.*

[4] Parmenides is rather speaking of fire and 'night', νὺξ ἀδαής (B8.59 DK). Cp. 227A.3 (= Simpl. *In Phys.* 184 b 15): πῦρ καὶ γῆν (ἢ μᾶλλον φῶς καὶ σκότος).

The fact that fire is characterized as "τὸ ὄν", ὡς αἴτιον καὶ ποιοῦν, and as τὸ δημιουργοῦ τάξιν ("rank") ἔχον, suggests that, *if* 'fire' may be subsumed under the 'dynamic' aspect of matter, the allegedly Parmenidean position is brought forward here too as most clearly exemplifying the dynamic factor. However this may be, the principles of fire and earth as ascribed to Parmenides seem to satisfy the conditions relevant here, these principles being 'without shape' anyway.

Another—to my mind unlikely—possibility[1] would be that Th. rather is thinking of the view expounded in Plato's *Tim.*, 31 B 6-8: (...) ἐκ πυρὸς καὶ γῆς τὸ τοῦ παντὸς ἀρχόμενος συνιστάναι σῶμα ὁ θεὸς ἐποίει. (Cp. 161A FHS&G.) In the first place, however, these two principles cannot do without the complementary principles of air and water; but more importantly, the principles of fire and earth are definitely endowed with shape (53 C 5 ff.), although in *Tim.* 51 A a shapeless ἐκμαγεῖον is pleaded for.

The second member of the disjunction represents the idea that the basic constituents of the cosmos (elements, particles) actually are shaped (μεμορφωμένας; i.e., matter plus form: cp. ἔμμορφος 7 a 6, 8 with commentary.

For the use of μορφή in this context (instead of the more technical σχῆμα) see 11 b 22; also *Sens.* 64 (*et passim*): "the transition from σχῆμα to μορφή in several of the passages that follow [i.e. *Sens.* 64 ff.] indicates that at least in Theophrastus's mind the expressions might upon occasion be interchanged, even for the 'atom'.", STRATTON (1917) 193. In the present passage the use of μορφή may actually be said to serve the coherence of the argument, which apparently rests on the difference between the shapes of particles/ atoms on the one hand, and the Aristotelian notion of form on the other, to a certain extent being ignored: see *ad* οἱ δ' ἄμφω κ.τ.λ. 7 a 7-8.[2]

It is to be noted that Aristotle explicitly rejects a quantitative conception of the elementary bodies in favour of a qualitative one:[3]

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[1] Or, a *related* possibility: see R-F (*ad loc.*), who suggest that Aristotle and Th. read this view into the Way of Opinion because fire and earth were treated—as is to be inferred from the *Timaeus*—as the primary elements later in the history of Pythagoreanism.

[2] *Contra* L-M *ad loc.*: "Théophraste ne ferait-il pas plutôt allusion, avec μεμορφωμένας, au modèle intelligible [*Tim.* 28 A 2-3] d'après lequel le démiurge façonne le monde [28 A 6-7]?" According to our interpretation, ἢ μεμορφωμένας in 6 b 26 represents a systematic position rather than a doxographic one (as opposed to οἱ ... ἐμμόρφους πάσας in 7 a 6-7), and has reference to *elementary* principles.—In fact, it is open to serious doubt whether the passive perfect μεμορφωμένας can be used even to allude to the intelligible παράδειγμα of the *Timaeus* (cp. *Tim.* 28 B 8 σῶμα ἔχων, of the visible world *created after* this model).

[3] Cp. Aristotle's preference for speaking in terms of δυνάμεις rather than στοιχεῖα in *PA* 646 a 13 ff.: τριῶν δ' οὐσῶν τῶν συνθέσεων πρώτην μὲν ἄν τις θείη τὴν ἐκ τῶν καλουμένων ὑπό τινων στοιχείων, οἷον γῆς, ἀέρος, ὕδατος, πυρός. *ἔτι δὲ βέλτιον ἴσως ἐκ τῶν δυνάμεων λέγειν*, ... ὑγρὸν γὰρ καὶ ξηρὸν καὶ θερμὸν καὶ ψυχρὸν ὕλη τῶν συνθέτων σωμάτων ἐστίν, ...

Arist. *Cael.* 306 b 3 ff. ὅλως δὲ τὸ πειρᾶσθαι τὰ ἁπλᾶ σώματα σχηματίζειν ἄλογόν ἐστι, ... (14) ὥστε φανερὸν ὅτι οὐκ ἔστιν ὡρισμένα τὰ σχήματα αὐτῶν. ἀλλ' ἔοικεν ἡ φύσις αὐτὴ τοῦτο σημαίνειν ἡμῖν, ὃ καὶ κατὰ λόγον ἐστίν· ὥσπερ γὰρ ἐν τοῖς ἄλλοις, ἀειδὲς καὶ ἄμορφον δεῖ τὸ ὑποκείμενον εἶναι.[1]

307 b 18-24 ὅτι μὲν οὖν οὐ τοῖς σχήμασι διαφέρει τὰ στοιχεῖα, φανερὸν ἐκ τῶν εἰρημένων· ἐπεὶ δὲ κυριώταται διαφοραὶ τῶν σωμάτων αἵ τε κατὰ τὰ πάθη καὶ τὰ ἔργα καὶ τὰς δυνάμεις (ἑκάστου γὰρ εἶναί φαμεν τῶν φύσει καὶ ἔργα καὶ πάθη καὶ δυνάμεις) πρῶτον ἂν εἴη περὶ τούτων λεκτέον, ὅπως θεωρήσαντες ταῦτα λάβωμεν τὰς ἑκάστου πρὸς ἕκαστον διαφοράς.

The quantitative conception of elementary principles may be motivated, Th. adds, by considerations of a normative nature (**ὡς ... δέον**),[2] i.c. by the axiom that within being as a whole the principles of all things (**μάλιστα**) must be definite.—For the (obvious) interrelation of form and definiteness (**τὸ ὡρίσθαι**) cp. ὁρίσας ... τὸ θερμὸν σχήματι, *Sens.* 87.

Although in Plato's *Timaeus*[3] (53 C 4 ff.) each of the four simple bodies is identified with one of the regular solids (earth with cube, water with icosahedron, etc.),[4] this work lends authority only to the rule that order is better than absence of order (see esp. 30 A 5-6 εἰς τάξιν αὐτὸ ἤγαγεν (sc. the Demiurge) ἐκ τῆς ἀταξίας, ἡγησάμενος ἐκεῖνο τούτου πάντως ἄμεινον), which constitutes the implicit *major* premiss of the present argument. The *Timaeus*, however, does not explicitly state either (1) the *minor* premiss that the ἀρχαί are, in fact, τὰ τιμιώτατα (as is implied by τοῖς **γὰρ** κ.τ.λ.), or (2) the conclusion posited here, that order is particularly appropriate in the case of the ἀρχαί,[5] not to mention the idea that this would hold for the elementary ἀρχαί just as well.

The valuableness of ἀρχαί in itself, however, is a commonplace in *Peripatetic* context:[6] see e.g.

Ps.-Arist. *MM* 1183 b 21-3 τὸ δὲ τίμιον λέγω τὸ τοιοῦτον, τὸ θεῖον, τὸ βέλτιον, οἷον ψυχή, νοῦς, τὸ ἀρχαιότερον, ἡ ἀρχή, τὰ τοιαῦτα.

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[1] In the sequel Aristotle noticeably adduces the *Timaeus* as authority for the view that the underlying matter must be devoid of shape: see also above.

[2] For this type of motivation cp. Arist. *GC* 325 a 13-5 ἐκ μὲν οὖν τούτων τῶν λόγων, ὑπερβάντες τὴν αἴσθησιν καὶ παριδόντες αὐτὴν ὡς τῷ λόγῳ δέον ἀκολουθεῖν, ἓν καὶ ἀκίνητον τὸ πᾶν εἶναί φασι καὶ ἄπειρον ἔνιοι. τὸ γὰρ πέρας περαίνειν ἂν πρὸς τὸ κενόν. Ps.-Arist. *MXG* 975 a 35-6 εἰ γάρ, φησί (sc. Melissus), μὴ ἐγένετο, ἔστι δέ, αἴδιον ἂν εἴη, ὡς δέον ὑπάρχειν τὸ εἶναι τοῖς πράγμασιν.

[3] The absence of the author's name reveals a familiarity which should cause no surprise even if it is supposed that the text was not for private use (only); *contra* Usener (1861) 274 "hier ist Πλάτων nach καθάπερ einzuschalten".

[4] See e.g. Lloyd (1970) 74 f.

[5] Cp. 4 a 5-9.

[6] Cp. Theiler "τίμιον ist Schulausdruck" (1958) 103 n. 63; see also *ad* τιμιώτερον 7 b 14.

Arist. *IA* 706 b 12-6 ἡ μὲν γὰρ ἀρχὴ τίμιον, τὸ δ' ἄνω τοῦ κάτω καὶ τὸ πρόσθεν τοῦ ὄπισθεν καὶ τὸ δεξιὸν τοῦ ἀριστεροῦ τιμιώτερον. καλῶς δ' ἔχει καὶ τὸ ἀνάπαλιν λέγειν περὶ αὐτῶν, ὡς διὰ τὸ τὰς ἀρχὰς ἐν τούτοις εἶναι ταῦτα τιμιώτερα τῶν ἀντικειμένων μορίων ἐστίν.

Cp. also *Cat.* 14 b 4 ff. where Aristotle mentions the common practice of designating τὸ βέλτιον καὶ τιμιώτερον as πρότερον ... τῇ φύσει.

—and, in fact, the present statement is perfectly in accordance with the Aristotelian point of view: see e.g.

Arist. *Met.* 1078 a 36 – b 5 τοῦ δὲ καλοῦ μέγιστα εἴδη τάξις καὶ συμμετρία καὶ τὸ ὡρισμένον, ἃ μάλιστα δεικνύουσιν αἱ μαθηματικαὶ ἐπιστῆμαι. καὶ ἐπεί γε πολλῶν αἴτια φαίνεται ταῦτα (λέγω δ' οἷον ἡ τάξις καὶ τὸ ὡρισμένον), δῆλον ὅτι λέγοιεν ἂν καὶ τὴν τοιαύτην αἰτίαν τὴν ὡς τὸ καλὸν αἴτιον τρόπον τινά.

GA 778 b 2-6 (...) οὐ διὰ τὸ γίγνεσθαι ἕκαστον ποιόν τι, διὰ τοῦτο ποιόν τί ἐστιν ὅσα τεταγμένα καὶ ὡρισμένα ἔργα τῆς φύσεώς ἐστιν, ἀλλὰ μᾶλλον διὰ τὸ εἶναι τοιαδὶ γίγνεται τοιαῦτα· τῇ γὰρ οὐσίᾳ ἡ γένεσις ἀκολουθεῖ καὶ τῆς οὐσίας ἕνεκά ἐστιν, ἀλλ' οὐχ αὕτη τῇ γενέσει.

PA 641 b 18-20 τὸ γοῦν τεταγμένον καὶ τὸ ὡρισμένον πολὺ μᾶλλον φαίνεται ἐν τοῖς οὐρανίοις ἢ περὶ ἡμᾶς, τὸ δ' ἄλλοτ' ἄλλως καὶ ὡς ἔτυχε περὶ τὰ θνητὰ μᾶλλον.

The treatment here, then, of the elementary principles under the common denominator of ἀρχαί (which as such could also apply to non-elementary, immaterial, unmoved first principles) draws the attention to the ontological status—and thus the value—of the elementary principles: if the elements are veritable ἀρχαί, they are also the most valuable of things, and therefore it is fitting that they should involve shape as well.[1]

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[1] In the case of the elementary principles a non-quantitative conception of material principles poses a problem that (1) could be evaded by calling in question the superiority of form, or (2) could be solved by accepting that some ἀρχαί (the shaped ones) are more valuable than others (the elements), or even that the elements are not ἀρχαί <in the same sense>. It seems that Aristotle inclined towards the second solution (see e.g. *DA* 430 a 18-9 ἀεὶ γὰρ τιμιώτερον τὸ ποιοῦν τοῦ πάσχοντος καὶ ἡ ἀρχὴ τῆς ὕλης); on the basis of the present treatise, at any rate, it is reasonable to surmise that Th. was more sympathetic to the first course: see esp. parr. IV.2-4, below.

Cp. however Themistius' report that in the context of the discussion about the practical intellect Th. did subscribe to this Aristotelian tenet:

320A.1-7 FHS&G (= Them. *In De An.*, 430 a 10-25) ἁψάμενος δὲ καὶ τῶν περὶ τοῦ ποιητικοῦ νοῦ διωρισμένων Ἀριστοτέλει, "ἐκεῖνο", φησὶν "ἐπισκεπτέον, ὃ δή φαμεν ἐν πάσῃ φύσει τὸ μὲν ὡς ὕλην καὶ δυνάμει, τὸ δὲ αἴτιον καὶ ποιητικόν, καὶ ὅτι ἀεὶ τιμιώτερον τὸ ποιοῦν τοῦ πάσχοντος, καὶ ἡ ἀρχὴ τῆς ὕλης." *ταῦτα μὲν ἀποδέχεται*, διαπορεῖ δέ· "τίνε οὖν αὗται αἱ δύο φύσεις; καὶ τί πάλιν τὸ ὑποκείμενον ἢ συνηρτημένον τῷ ποιητικῷ; μικτὸν γάρ πως ὁ νοῦς ἔκ τε τοῦ ποιητικοῦ καὶ τοῦ δυνάμει. ...".

7 a 1-4 φαίνεται δὲ ... τὰς ἀρχάς.

καθάπερ ἐν γραμματικῇ καὶ μουσικῇ καὶ ταῖς μαθηματικαῖς J², Usener (1890); καθάπερ ἡ γραμματικὴ καὶ μουσικὴ καὶ ταῖς μαθηματικαῖς PJA; καθάπερ ἡ μουσικὴ καὶ ἡ γραμματικὴ καὶ ταῖς μαθηματικαῖς CL; καθ' ἅσπερ ἡ γραμματικὴ καὶ ἡ μουσική, κἂν ταῖς μαθηματικαῖς Usener (1861) 274.

Here again, **ἐν ταῖς λοιπαῖς** seems to refer to the ἐπιστῆμαι other than the one ἐπιστήμη discussed here (which in the present context is natural science: see 7 a 5 αἵπερ τὴν φύσιν μιμοῦνται); cp. 6 b 21-2. In this case **σχεδόν** restricts the suggestion of comprehensiveness: cp. expressions like πάντα σχεδόν e.g. (*Od.* 21; Arist. *PA* 649 a 24, 650 a 23, 675 a 26); also 8 b 20.[1]

The presence of ἀρχαί as topic in what precedes may have caused the corruption of the manuscript tradition, which can hardly be correct—since καὶ ταῖς μαθηματικαῖς (or κἂν τ. μ. for that matter) is rather pointless after ἐν ταῖς λοιπαῖς σχεδόν (especially with "καθάπερ ἡ γραμματικὴ καὶ μουσικὴ <sc. show>"[2] in between); one would at least have expected *καὶ *δὴ* τ. μ.

Usener (1861) 274-5 rightly adduces the following ἔτι δὲ καὶ κατὰ τὰς τέχνας ὁμοίως (introducing the arts as showing a situation similar to that in the ἐπιστῆμαι) as a point in case.

οὕτω refers to the possibility mentioned immediately before, that principles are shaped (τὰς ἀρχὰς ... μεμορφωμένας): in (e.g.) the grammatical and musical sciences and in mathematics the respective principles appear to be exactly like this: in grammatical science, the letters (cp. the analogy between letters and elements like fire and earth in Aristotle *Met.* 1041 b 13 ff.); in musical science, the notes (or, in the case of 'poetics': the metric elements, or the (long or short) syllables); in mathematics, points, lines, or primary numbers. For both the first and the last example, cp. Arist. *Cat.* 14 a 38 – b 2 τὰ γὰρ στοιχεῖα πρότερα τῶν διαγραμμάτων τῇ τάξει, καὶ ἐπὶ τῆς γραμματικῆς τὰ στοιχεῖα πρότερα τῶν συλλάβων, ...

The order and the definiteness observed in the things of nature (**τὰ μετὰ τὰς ἀρχάς**—here again with reference to the objects of sense: cp. 6 b 19), too (**καί**), are an argument in favour of the definiteness/shapedness of the prin-

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[1] "σχεδόν ('just about', 'approximately') is a word that qualifies [Th.'] statements so frequently as to become a mannerism.", Eichholz (1965) 6.

[2] The manuscript reading with the nominative might be accounted for by supposing that these words originally were a marginal gloss to exemplify the kind of science potentially involved.

ciples themselves: the argument will be developed in 7 a 10 ff. Apparently this remark pertains in particular to the situation in the sciences mentioned in the previous sentence—**δέ** introducing a new point, which apparently is meant to apply to the *physical* principles too (for the analogy with mathematics, cp. *MM* 1187 a 30 ff. quoted below). The function of this sentence, then, seems to be brought out most clearly by reading a colon after ταῖς μαθηματικαῖς.

Since συνακολουθεῖ δὲ καὶ κ.τ.λ. is not dependent on the immediately preceding sentence, even less grammatically subordinate to φαίνεται δὲ καί, USENER's συνακολουθεῖν (1890) is neither necessary nor likely. Cp. L-M *ad loc.*

For **συνακολουθεῖν** "to follow naturally/organically" cp. 8 a 2.[1] The verb is also used to denote what goes with elements which are *qualitatively* differentiated: see

Ps.-Arist. *De color.* 791 a 1-2 ἁπλᾶ τῶν χρωμάτων ἐστὶν ὅσα τοῖς στοιχείοις συνακολουθεῖ, οἷον πυρὶ καὶ ἀέρι καὶ ὕδατι καὶ γῇ.

The simple verb is used in a similar way in

Arist. *PA* 646 a 16-20 ὑγρὸν γὰρ καὶ ξηρὸν καὶ θερμὸν καὶ ψυχρὸν ὕλη τῶν συνθέτων σωμάτων ἐστίν· αἱ δ' ἄλλαι διαφοραὶ ταύταις ἀκολουθοῦσιν, οἷον βάρος καὶ κουφότης ... καὶ τἆλλα τὰ τοιαῦτα πάθη τῶν σωμάτων.

Of qualities in general:

Ps.-Arist. *De color.* 796 b 20-2 διὸ καὶ τὰς ὀσμὰς καὶ τοὺς χυλοὺς πολὺ διαφόρους συμβαίνει τοῖς ἄνθεσι καὶ τοῖς καρποῖς συνακολουθεῖν, cp. 797 b 12, 18; also *CP* V.7.2; the simple verb in *Lap.* 2.
See also *ad* καθακολουθεῖν, 11 b 16.

The phrase is yet another instance of Theophrastean brevity, for in what respect the physical objects follow <the principles> is merely implied. In fact, the lack of explicitness here may be significant, because, whereas the present discussion suggests that shape of some kind is likely to be involved, Th. himself seems to be inclined to ascribe to the elementary principles some kind of minimal determinateness, in the form of some particular δύναμις (hot, cold), only; cp. ὡς ἀόριστον τοῖς εἴδεσιν, δύναμιν δέ τιν' ἔχον, 8 a 18-9.

For the idea, compare

Ps.-Arist. *MM* 1187 a 30 – b 2 πᾶσα γὰρ φύσις γεννητική ἐστιν οὐσίας τοιαύτης οἷά ἐστίν, οἷον τὰ φυτὰ καὶ τὰ ζῷα· ἀμφότερα γὰρ γεννητικά. γεννητικὰ δὲ ἐκ τῶν ἀρχῶν, οἷον τὸ δένδρον ἐκ τοῦ σπέρματος· αὕτη γάρ τις ἀρχή. τὸ

[1] In Aristotelian logic, the verb is used in the sense of "to follow naturally with (a term)", "to be involved in": see LSJ III s.v.

> δὲ μετὰ τὰς ἀρχὰς οὕτως ἔχει· *ὡς γὰρ ἂν ἔχωσιν αἱ ἀρχαί, οὕτως καὶ τὰ ἐκ τῶν ἀρχῶν ἔχει.*
>
> ἐναργέστερον δ' ἔστι κατιδεῖν τοῦτο ἐν τοῖς κατὰ γεωμετρίαν· καὶ γὰρ ἐκεῖ ἐπειδή τινες λαμβάνονται ἀρχαί, ὡς ἂν αἱ ἀρχαὶ ἔχωσιν, *οὕτω καὶ τὰ μετὰ τὰς ἀρχάς*, οἷον εἰ τὸ τρίγωνον δυσὶν ὀρθαῖς ἴσας ἔχει, τὸ δὲ τετράγωνον τέτταρσιν, ὡς ἂν μεταβάλλῃ τὸ τρίγωνον, οὕτω καὶ τὸ τετράγωνον συμμεταβάλλει·...
>
> "The geometrical *principia* are of course not really liable to change; but for the sake of illustration the author ... supposes that they are, and imagines a triangle of 3 or 4 right angles!", ARMSTRONG *ad loc.*

7 a 4-6 **ἔτι δὲ καὶ ... κατὰ τὰς ἀρχάς.**

ἔτι δὲ[1] **καί** is on a par with δὲ καί in 7 a 1, introducing yet another analogy: in the case of the arts too the situation is similar (to that in natural science, and by implication also to that in the other disciplines). With **αἵπερ τὴν φύσιν μιμοῦνται** Th. brings forward as a case in point the tenet that art imitates nature: it is precisely in their quality of imitators of nature (note *αἵπερ*) that the arts provide the critical test as to the shaped- or shapelessness of the principles of nature.

For the idea that art imitates nature, see *Lap.* 60, *CP* II.18.2; also Arist. *Phys.* 199 a 15 ff., *Meteor.* 381 b 6 (and elsewhere).[2] The idea has been connected with the Hippocratic conception of medical science as aiming at the specific bodily condition which nature creates of its own accord:[3]

> Hippocr. *De victu* I.15 (22 C 1 (Heraclitus, Imitation 1), I.186.27-9 DK) καὶ τόδε ἰητρικῆς· τὸ λυπέον ἀπαλλάσσειν καὶ ὑφ' οὗ πονεῖ ἀφαιρέοντα ὑγιέα ποιεῖν. ἡ φύσις αὐτομάτη ταὐτὰ ἐπίσταται; cp. *ibid.* 186.8 φύσιν ἀνθρώπου καὶ βίον ταῦτα (sc. the method of ἡ μαντική) μιμεῖται.

Aristotle uses the same picture in order to convince the physicist of the necessity of including in his study of nature both matter and form:

> Arist. *Phys.* 194 a 21-7 εἰ δὲ ἡ τέχνη μιμεῖται τὴν φύσιν, τῆς δὲ αὐτῆς ἐπιστήμης εἰδέναι τὸ εἶδος καὶ τὴν ὕλην μέχρι του (οἷον ἰατροῦ ὑγίειαν καὶ χολὴν καὶ φλέγμα, ἐν οἷς ἡ ὑγίεια, ὁμοίως δὲ καὶ οἰκοδόμου τό τε εἶδος τῆς οἰκίας καὶ τὴν ὕλην, ὅτι πλίνθοι καὶ ξύλα, ὡσαύτως δὲ καὶ ἐπὶ τῶν ἄλλων), καὶ τῆς φυσικῆς ἂν εἴη τὸ γνωρίζειν ἀμφοτέρας τὰς φύσεις.

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[1] Cp. 7 b 22, 9 b 25, 10 b 11, 10 b 20.

[2] See e.g. SOLMSEN (1963), BARTELS (1966) 20 ff.

[3] NESTLE (1938) 14-7; ISNARDI PARENTE (1966) 274 ff.; it has been suggested that the idea was inspired by Heraclitus; NESTLE (*l.c.*) refers to B 112.2-3, I.76 DK: (...) σοφίη ἀληθεία λέγειν *καὶ ποιεῖν κατὰ φύσιν ἐπαίοντας*, which KIRK (1954) 390 suspects to be spurious; a similar sentiment, however, may have been expressed in διὸ δεῖ ἕπεσθαι τῷ ξυνῷ κ.τ.λ. (Heracl. B 2, I.151 DK).

καὶ τὰ ὄργανα κ.τ.λ. renders explicit the purport of ὁμοίως: "both the ὄργανα and the other things" are in accordance with the ἀρχαί; in the light of the present argument this can only mean that the principles are shaped, since the "ὄργανα" and the other things are shaped (or something like that: note **ὁμοίως**, contrast (ἔχειν) οὕτω 7 a 1-2) too.

καὶ (τὰ ὄ.) ... καὶ (τὰ ἄ.) constitute a coordinated couple, the clause as a whole explaining ὁμοίως—as could have been made explicit by γάρ.

The clause is not parallel, then, to συνακολουθεῖ δὲ καὶ κ.τ.λ. 7 a 3, as L-M (*ad loc.*) have it; L-M accordingly claim that the first καί parallels δέ in the earlier passage, but this is not in any way very likely in view of the difference in general between clauses linked by καί and those linked by δέ.[1]

In the present context the statement as to the arts, adduced by way of analogy, is obviously relevant, in that both (1) the tools follow the concept of the product as a goal in the mind of the artisan:[2] see *DA* 407 b 25-6 δεῖ γὰρ τὴν μὲν τέχνην χρῆσθαι τοῖς ὀργάνοις, τὴν δὲ ψυχὴν τῷ σώματι,[3] and (2) the product of the art has as its principle the form in the soul of the maker: see e.g.

Arist. *Met.* 1032 a 32 ff. ἀπὸ τέχνης δὲ γίγνεται ὅσων τὸ εἶδος ἐν ψυχῇ (cp. also b 21-3, on the art of medicine: τὸ δὴ ποιοῦν καὶ ὅθεν ἄρχεται ἡ κίνησις τοῦ ὑγιαίνειν, ἂν μὲν ἀπὸ τέχνης, τὸ εἶδός ἐστι τὸ ἐν τῇ ψυχῇ).

The analogy, then, works out nicely from an Aristotelian point of view:

Arist. *Met.* 1033 b 5-10 φανερὸν ἄρα ὅτι τὸ εἶδος, ἢ ὁτιδήποτε χρὴ καλεῖν τὴν ἐν τῷ αἰσθητῷ μορφήν, οὐ γίγνεται, οὐδ' ἔστιν αὐτοῦ γένεσις, οὐδὲ τὸ τί ἦν εἶναι· (τοῦτο γάρ ἐστιν ὃ ἐν ἄλλῳ γίγνεται ἢ ὑπὸ τέχνης ἢ ὑπὸ φύσεως ἢ δυνάμεως.) τὸ δὲ χαλκῆν σφαῖραν εἶναι ποιεῖ· ποιεῖ γὰρ ἐκ χαλκοῦ καὶ σφαίρας· εἰς τοδὶ γὰρ τὸ εἶδος ποιεῖ, καὶ ἔστι τοῦτο σφαῖρα χαλκῆ.

Cp. Ross (1924) I.cx-i: "As the elements are the matter out of which by the imposition of certain forms or principles of structure tissues (τὰ ὁμοιομερῆ) are made, and as tissues are the matter out of which organs (τὰ ἀνομοιομερῆ) are made, so organs are the matter out of which by the imposition of a certain form,

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[1] See Sicking (1993) 11-2.

[2] Cp. also Arist. *Protr.* B 48-9 D. καὶ τῶν μὲν ἄλλων τεχνῶν τά τ' ὄργανα καὶ τοὺς λογισμοὺς τοὺς ἀκριβεστάτους οὐκ ἀπ' αὐτῶν τῶν πρώτων λαβόντες σχεδὸν ἴσασιν, ἀλλ' ἀπὸ τῶν δευτέρων καὶ τρίτων καὶ πολλοστῶν, τοὺς δὲ λόγους ἐξ ἐμπειρίας λαμβάνουσι· τῷ δὲ φιλοσόφῳ μόνῳ τῶν ἄλλων ἀπ' αὐτῶν τῶν ἀκριβῶν ἡ μίμησίς ἐστιν· αὐτῶν γάρ ἐστι θεατής, ἀλλ' οὐ μιμημάτων. (49) ὥσπερ οὖν οὐδ' οἰκοδόμος ἀγαθός ἐστιν οὗτος ὅστις κανόνι μὲν μὴ χρῆται μηδὲ τῶν ἄλλων μηδενὶ τῶν τοιούτων ὀργάνων, ἑτέροις δ' οἰκοδομήμασι παραβάλλων, ὁμοίως ἴσως κἂν εἴ τις ἢ νόμους τίθεται πόλεσιν ἢ πράττει πράξεις ἀποβλέπων καὶ μιμούμενος πρὸς ἑτέρας πράξεις ἢ πολιτείας ἀνθρωπίνας ..., οὐκ ἀγαθὸς νομοθέτης οὐδὲ σπουδαῖος· κ.τ.λ.

[3] See Arist. *GA* 734 b 36 ff., and Lennox (1982) *ad loc.*, cited below.

the soul, a living body is made, 'made' not in the sense that the elements necessarily exist before the tissues, the tissues before the organs, or the organs before the living body, but in the sense that logical analysis can draw the distinction between matter and form at these various levels."

Arist. *PA* 641 a 7-14 οὕτως γὰρ καὶ οἱ φυσιολόγοι τὰς γενέσεις καὶ τὰς αἰτίας τοῦ σχήματος λέγουσιν· ὑπό τινων γὰρ ἐδημιουργήθησαν δυνάμεων. ἀλλ' ἴσως ὁ μὲν τέκτων ἐρεῖ πέλεκυν ἢ τρύπανον, ὁ δ' ἀέρα καὶ γῆν, πλὴν βέλτιον ὁ τέκτων· οὐ γὰρ ἱκανὸν ἔσται αὐτῷ τὸ τοσοῦτον εἰπεῖν, ὅτι ἐμπεσόντος τοῦ ὀργάνου τὸ μὲν κοῖλον ἐγένετο τὸ δὲ ἐπίπεδον, ἀλλὰ διότι τὴν πληγὴν ἐποιήσατο τοιαύτην, καὶ τίνος ἕνεκα, ἐρεῖ τὴν αἰτίαν, ὅπως τοιόνδε ἢ τοιόνδε ποτὲ τὴν μορφὴν γένηται.

687 a 10-2 αἱ μὲν γὰρ χεῖρες ὄργανόν εἰσιν, ἡ δὲ φύσις ἀεὶ διανέμει, καθάπερ ἄνθρωπος φρόνιμος, ἕκαστον τῷ δυναμένῳ χρῆσθαι.

GA 734 b 36 – 735 a 4 (the λόγος in animals is produced by the movement which is derived from the generating parent) ὥσπερ καὶ ἐπὶ τῶν γινομένων κατὰ τέχνην. σκληρὸν μὲν γὰρ καὶ μαλακὸν τὸν σίδηρον ποιεῖ τὸ θερμὸν καὶ τὸ ψυχρόν, ἀλλὰ ξίφος ἡ κίνησις ἡ τῶν ὀργάνων, ἔχουσα λόγον τὸν τῆς τέχνης. ἡ γὰρ τέχνη ἀρχὴ καὶ εἶδος τοῦ γινομένου ἀλλ' ἐν ἑτέρῳ· ἡ δὲ τῆς φύσεως κίνησις ἐν αὐτῷ ἀφ' ἑτέρας οὖσα φύσεως τῆς ἐχούσης τὸ εἶδος ἐνεργείᾳ.

"In the crafts, the artist works on his material by means of his manipulation of the tools of his trade. But the movements of those tools (ἡ κίνησις ἡ τῶν ὀργάνων ...) are not random: they are guided by the principles of the craft Aristotle identifies as the form of that craft's product. ... To state the doctrine generally: the artist, by means of his knowledge of the form of the product of his craft, governs the activity of his tools so that his materials come to exemplify that form. In this way, that form is responsible for the process that eventuates in its exemplification in certain materials." LENNOX (1982) 222; cp. also GOTTHELF (1976-77) 240; BALME (1972) 94-5.

As to the point at issue here, the possibility of the *elementary principles* actually *being endowed with shape*, however, the argument is less obvious;[1] nevertheless, the idea of (τὰ ὄργανα in the sense of) the sense-organs deriving their form from the shape of the principles may be recognized in e.g.

Sens. 5 καὶ τὴν μὲν ὄψιν ποιεῖ (sc. Πλάτων) πυρός (διὸ καὶ τὸ χρῶμα φλόγα τιν' ἀπὸ τῶν σωμάτων σύμμετρα μόρια τῇ ὄψει ἔχουσαν), ...

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[1] It is to be noted that in the Aristotelian context the analogy does not at all result in an actual shapedness of the principle which constitutes the analogon of the carpenters tools, but rather causes him to postulate an elementary principle with a special kind of δύναμις: "we may bear in mind that nature too employs 'tools' or 'instruments' (*organa*). The vital spirit (*pneuma*), for instance, is in Book V of *de generatione animalium* called 'an instrument useful for many purposes' (*polychreston organon*) and compared with the hammer and anvil employed by a

Sens. 7 Ἐμπεδοκλῆς δὲ περὶ ἁπασῶν ὁμοίως λέγει καί φησι τῷ ἐναρμόττειν εἰς τοὺς πόρους τοὺς ἑκάστης αἰσθάνεσθαι· ... τοὺς δὲ πόρους ἐναλλὰξ κεῖσθαι τοῦ τε πυρὸς καὶ τοῦ ὕδατος, ὧν τοῖς μὲν τοῦ πυρὸς τὰ λευκά, τοῖς δὲ τοῦ ὕδατος, ὧν τοῖς μὲν τοῦ πυρὸς τὰ λευκά, τοῖς δὲ τοῦ ὕδατος τὰ μέλανα γνωρίζειν· ἐναρμόττειν γὰρ ἑκατέροις ἑκάτερα.

What we have here, then, is a discussion of the general, theoretical option of unshaped vs. shaped elementary principles. This discussion strongly relies on arguments which are at home especially in Aristotelian context; it does not cover, however, the Aristotelian solution of having it both ways (which does feature in the following discussion of points of view which are actually being held).

IV.2 (7 a 6 – b 5): *With regard to the choice between shaped and unshaped elementary principles, three positions may be distinguished in the doxography: some people assume only shaped elementary principles, others only material ones; a third group assumes both shaped and unshaped principles. Considering the order in the cosmos and its constituents, it seems unlikely that there would be no definiteness whatsoever in the principles (although this is what physiologists who assume a single material principle hold).*

The third, most plausible, conception of principles, which holds that they involve both matter and form, cannot explain the variety of form observed in sublunary nature, as long as the determinateness of these entities is supposed to be due to a final cause. A solution would be to ascribe this diversity to the influence of the heavenly bodies.

7 a 6-10 οἱ μὲν οὖν ... τὴν ἅπασαν οὐσίαν.

What follows now is presented by οὖν as something the preceding—more theoretical—disjunction has been leading up to, a characterization of the different doxographical positions. The first group (οἱ μέν) are the radical supporters of the second option brought forward earlier, that of the elementary principles being endowed with shape (ἔμμορφοι, see *ad* μεμορφωμένας, 6 b

smith. Clearly the biologist would give an inadequate account if he were content with stating what instruments nature uses (although Aristotle's precursors have in his opinion done no more than this); he must also point out what ends nature pursues with the help of these 'instruments'." SOLMSEN (1963) 489.

The vagueness of κατὰ τὰς ἀρχάς (and of συνακολουθεῖ) in the present passage seems intentional in order to suit the purpose of formulating in Peripatetic terms the advantages of a

26): this holds for all principles without exception (**πάσας**); **οἱ δέ** are those who recognize material principles only (**μόνον**) and who may be considered to be unqualified supporters of the first option mentioned earlier, that of the principles being ἄμορφοι καὶ οἷον δυναμικαί (6 b 24-5).[1] A third group (**οἱ δ(έ)**) combines these two options (**ἄμφω**), recognizing both principles endowed with shape and those of matter.

Presumably representatives of the first two groups are Democritus[2] and those physiologists who adhere to a single material principle (Heraclitus excepted? see below) respectively: see *ad* 6 b 24-6. Aristotle is likely to be the main representative of the third position, which may also include the conception of elementary bodies endowed with shape as developed in Plato's *Timaeus*, notwithstanding the fact that an argument from this dialogue is referred to in the context of the possibility of shaped principles (see above).

ἔμμορφος does not occur in Aristotle, and has (regularly formed as it is as the opposite of ἄμορφος: cp. ἔμψυχος) perhaps been coined by Th.[3] for the purpose of bringing together (a) the Aristotelian principles of enmattered form and matter as the inseparable substratum (hence, perhaps, the phrase **τὰς τῆς ὕλης**: principles in so far as they consist of matter?) with (b) the distinction between principles with or without shape.

One may compare

Arist. *Met.* 1013 b 17-23 τὰ μὲν γὰρ στοιχεῖα τῶν συλλαβῶν καὶ ἡ ὕλη τῶν σκευαστῶν καὶ τὸ πῦρ καὶ ἡ γῆ καὶ τὰ τοιαῦτα πάντα τῶν σωμάτων καὶ τὰ μέρη τοῦ ὅλου καὶ αἱ ὑποθέσεις τοῦ συμπεράσματος ὡς τὸ ἐξ οὗ αἴτιά ἐστιν· τούτων δὲ τὰ μὲν ὡς τὸ ὑποκείμενον, οἷον τὰ μέρη, *τὰ δὲ ὡς τὸ τί ἦν εἶναι, τό τε ὅλον καὶ ἡ σύνθεσις καὶ τὸ εἶδος*.[4] (Cp. *Phys.* 195 a 16 ff.)

1023 b 19 ff. (μέρος λέγεται) ἔτι εἰς ἃ διαιρεῖται ἢ ἐξ ὧν σύγκειται τὸ ὅλον, *ἢ τὸ εἶδος ἢ τὸ ἔχον τὸ εἶδος*, οἷον τῆς σφαίρας τῆς χαλκῆς ἢ τοῦ κύβου τοῦ χαλκοῦ καὶ ὁ χαλκὸς μέρος (τοῦτο δ' ἐστὶν *ἡ ὕλη ἐν ᾗ τὸ εἶδος*) καὶ ἡ γωνία μέρος.

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[1] Note that the conception of elementary principles ascribed to Parmenides, in which fire features as the 'active' principle as distinct from the material principle of earth and which presumably is adduced in order to exemplify the first possibility of non-shaped principles, does not come under the present characterization of οἱ ... μόνον τὰς ὑλικάς (see *ad* ὥσπερ ὅσοι πῦρ καὶ γῆν 6 b 25-6).

[2] Cp. 11 b 21-3. *Contra* L-M (*ad loc.*): "La référence est à Platon (cf. 6b27), pour autant qu'on interprète sa position comme 'formaliste'—ce qui n'est pas toujours le cas dans l'opuscule" (see 11 a 27 ff.). As a matter of fact, ἔμμορφος seems to be even less apt to be used with reference to the παράδειγμα of the Ideas than μεμορφωμένας in 6 b 26: see p. 287 n. 2 above.

[3] Cp. L-M *ad loc.*

[4] As Ross *ad loc.* notes, "at the beginning of the chapter Aristotle distinguished that ἐξ οὗ γίγνεταί τι ἐνυπάρχοντος and the εἶδος or παράδειγμα; he now includes both under the ἐξ οὗ, which is of two kinds, the ὑποκείμενον and the τί ἦν εἶναι." (I.293).

The relation, then, of this third position to the two other positions is not quite as straightforward as it seems to be at first sight; for the Aristotelian principle of form (whether conceived as μορφή or as εἶδος/στέρησις) does not seem to be quite on a par with elementary principles *plus* or *minus* shape,[1] being as it is on the one hand opposed to, and 'acting upon', the ὑποκείμενον of matter (which is 'the form in question potentially'), but on the other hand inseparable from matter: Arist. *GC* 320 b 16-7 ἡ ὕλη, ἣν οὐδέποτ' ἄνευ πάθους οἷόν τε εἶναι οὐδ' ἄνευ μορφῆς.; in *Met.* 1070 b 22 εἶδος, στέρησις, ὕλη are τὰ ἐνυπάρχοντα αἴτια.[2]

The conclusion seems justified that Th.' designation of the Aristotelian conception of form as "enformed principles" (i.e., particular cases of form qualifying matter) and of his conception of matter as "principles of form" (i.e., matter viewed as a substratum to particular cases of form) involves an effort to formulate the Aristotelian conception in terms approximating as much as possible the theoretical distinction between elements endowed with shape and non-shaped elements as made in the previous paragraph. This apparent simplification seems to testify to —if not to be justified by—the fact that these different conceptions were actually seen as solutions of one and the same problem.

The grounds added in the clause introduced by **ὡς**,[3] to the effect that a whole (τὸ ὅλον, τὸ ἕν) or a complete entity (**τὸ τέλεον**) consists of both form and matter—or, form *plus* matter—(**ἐν ἀμφοῖν**), are of course an Aristotelian tenet:[4] Arist. *Met.* 1023 a 34 τέλος μὲν ... ἐστιν ἡ μορφή, τέλειον δὲ τὸ ἔχον τέλος, 1084 b 11-2 τὸ ὅλον τὸ ἐκ τῆς ὕλης καὶ τοῦ εἴδους, 1052 a 22-3 ἔτι τοιοῦτον (sc. "ἕν") καὶ μᾶλλον τὸ ὅλον καὶ ἔχον τινὰ μορφὴν καὶ εἶδος, ...

For the association of ἕν, ὅλον, τέλεον cp. Arist. *Met.* 1016 b 16-7 διὸ καὶ ἡ τοῦ κύκλου μάλιστα μία τῶν γραμμῶν, ὅτι ὅλη καὶ τέλειός ἐστιν; also *Phys.* 228 b 11 ff. (of κίνησις). In *Phys.* 207 a 13 ff. Aristotle suggests that there might be a difference (in aspect?): ὅλον δὲ καὶ τέλειον ἢ τὸ αὐτὸ πάμπαν ἢ σύνεγγυς τὴν φύσιν, τέλειον δ' οὐδὲν μὴ ἔχον τέλος.

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[1] In view of the plural τὰς τῆς ὕλης the conception of elementary principles brought forward in the *Timaeus* would not do any better; cp. above.

[2] Cp. also τὸ ἐνυπάρχον ἀόριστον Ps.-Arist. *Meteor.* IV, 380 b 14.

[3] USENER's addition of <ὄν> after τὸ τέλεον (USENER (1890); adopted by R-F) obviously is quite unnecessary (cp. L-M *ad loc.*), the ellipse of εἶναι being common in Th.' writings: see e.g. *HP* II.3.2 ... ὡς τέρατα καὶ παρὰ φύσιν (sc. ὄντα) ὑπολαμβάνουσι, *CP* III.5.3 καὶ τὰ φύτα μάλιστα μὲν ὑπόρριζα (sc. ὄντα) λαμβάνουσι, HINDENLANG (1910) 86.

[4] Cp. also 144A.24-5 τὸ ἐν ὑπάρξει σῶμα οὐκ ἔστιν ἁπλοῦν, ἀλλὰ σύνθετον ἐξ ὕλης καὶ εἴδους; also 318.3-4 κατὰ ... τὸ συναμφότερον αὐτό ("the thing itself is in respect of the combination of both (form and matter)"), tr. FHS&G.

τὸ ἐξ ἀμφοῖν is said of the combination of matter and form in

> Arist. *DA* 414 a 14-9 τριχῶς γὰρ λεγομένης τῆς οὐσίας ... ὧν τὸ μὲν εἶδος, τὸ δὲ ὕλη, τὸ δὲ *ἐξ ἀμφοῖν*· τούτων δ' ἡ μὲν ὕλη δύναμις, τὸ δὲ εἶδος ἐντελέχεια· ἐπεὶ δὲ τὸ *ἐξ ἀμφοῖν* ἔμψυχον, οὐ τὸ σῶμά ἐστιν ἐντελέχεια ψυχῆς, ἀλλ' αὕτη σώματός τινος.
>
> Ps.-Arist. *Meteor.* IV, 382 a 2 καὶ διὰ τοῦτο ἐξ ἀμφοῖν ἐστὶ τὸ ὡρισμένον σῶμα (sc. consisting of both τὸ ὑγρόν, which is εὐόριστον, and τὸ ξηρόν, which is δυσόριστον).

It may be inferred from Ch. VI below that Th. himself would subscribe to this tenet; cp. 320A.17 FHS&G (= Them. *In De An.* 3.5 430 a 10-25) ἓν γὰρ τὸ ἐξ ὕλης καὶ εἴδους.

For the phrase, cp. *CP* III.2.3 τὸ δὲ τέλειον ἐξ ἀμφοῖν (sc. comes from both understanding and habit).

οἷον **γὰρ** κ.τ.λ. explicitly applies this tenet to the matter at issue: reality as a whole (**τὴν ἅπασαν οὐσίαν**: see *ad* 4 a 13), the subject of the discussion, "so to speak" comes from opposites. The fact that **οἷον** is added seems to indicate that Th. is conforming to an Aristotelian axiom by using the phrase **ἐξ ἀντικειμένων** ("from opposites"; sc. as an ἀρχή) instead of ἐξ ἐναντίων ("from contraries", see 11 b 11-2), a phrase that would have been objectionable to Aristotle: see Arist. *Met.* 1075 a 28-31 πάντες γὰρ ἐξ ἐναντίων ποιοῦσι πάντα. οὔτε δὲ τὸ πάντα οὔτε τὸ ἐξ ἐναντίων ὀρθῶς, ...· ἀπαθῆ γὰρ τὰ ἐναντία ὑπ' ἀλλήλων. (For the distinction between the generic term τὰ ἀντικείμενα and the more specialized use of τὰ ἐναντία, see Arist. *Cat.* 11 b 15 ff.) Contraries cannot be ἀρχαί of things (let alone of being as a whole) in the strict sense of the word since they presuppose a substratum prior to them:

> Arist. *Met.* 1087 a 29 ff. πάντες δὲ ποιοῦσι τὰς ἀρχὰς ἐναντίας, ὥσπερ ἐν τοῖς φυσικοῖς, καὶ περὶ τὰς ἀκινήτους οὐσίας ὁμοίως. ... ἀλλὰ μὴν γίγνεται πάντα ἐξ ἐναντίων ὡς ὑποκειμένου τινός· ἀνάγκη ἄρα μάλιστα ἐν τοῖς ἐναντίοις τοῦθ' ὑπάρχειν. ἀεὶ ἄρα πάντα τἀναντία καθ' ὑποκειμένου, καὶ οὐθὲν χωριστόν· ἀλλ' ὥσπερ καὶ φαίνεται οὐθὲν οὐσίᾳ ἐναντίον, καὶ ὁ λόγος μαρτυρεῖ. οὐθὲν ἄρα τῶν ἐναντίων κυρίως ἀρχὴ πάντων ἀλλ' ἑτέρα.

Like the use of ἔμμορφοι and αἱ τῆς ὕλης (ἀρχαί) Th.' use of the generic term τὰ ἀντικείμενα thus seems meant to facilitate the discussion of the Aristotelian principles in one and the same context as those adopted by his precursors.

7 a 10-5 ἄλογον δὲ ... "ὁ Κόσμος".

σωρὸς Usener (1861) 276; σάρξ MSS.; σωρῶν L-M (Most (1988) 247); σάρμα DK; σάρον (sterculinum) Bernays ap. Schuster (1873) 390, (and κεχυμένον) Usener (1890); for other conjectures, see L-M *app. crit. ad loc.*

ἄλογον expresses that the situation cannot be rationally accounted for (as opposed to what is εὔλογον, see *ad* 4 a 13), implying as it does that there is, or may be expected to be, some sort of organisation in nature which can be disclosed by reason; e.g.

> *CP* I.2.2 ἐνταῦθα γὰρ οὐδὲν ἄλογον ὥσπερ καὶ τὰς ἄλλας παραφυάδας (sidegrowths), ὑπορρίζους οὔσας καὶ ἐνύγρους καὶ ταύτας βλαστάνειν· ἐπεὶ εἴ γε μὴ ἦσαν ὑπόρριζοι, χαλεπὸν ἢ ἀδύνατον.
> I.4.6 ἰδιωτάτη δὲ βλάστησις ἡ ἐκ τῶν δακρύων (from exudations), οἷον τοῦ θ' ἱπποσελίνου καὶ τοῦ κρίνου καὶ ἐνίων ἑτέρων. οὐκ ἄλογος δέ, ἀλλ' ὁμολογουμένη τῇ ἐκ τῶν καυλῶν (from split stems)· ...
> (Also I.16.5 ... οὐκ ἄλογον ..., ἀλλ' ἔχει τὸ ἀνὰ λόγον.)

—cp. ἄτοπον, which in addition conveys an element of surprise, a person's reaction to the unaccountable (see 5 a 18 ἄτοπον τὸ μὴ πάντα τὴν αὐτήν),

> Arist. *Div.* 462 b 18-22 τὸ δὲ μηδεμίαν αἰτίαν *εὔλογον* ὁρᾶν, καθ' ἣν ἂν γίνοιτο, τοῦτο διαπιστεῖν ποιεῖ· τό τε γὰρ θεὸν εἶναι τὸν πέμποντα, *πρὸς τῇ ἄλλῃ ἀλογίᾳ*, καὶ τὸ μὴ τοῖς βελτίστοις καὶ φρονιμωτάτοις ἀλλὰ τοῖς τυχοῦσι πέμπειν *ἄτοπον*.
> (See also *Phys.* 196 b 1-5, below.)

whereas ἄπορον is rather used of *the question raised by* such an unaccountable situation (see 10 b 24-5 αὐτὸ γὰρ τοῦτο ἄπορον τὸ μὴ ἔχειν λόγον).

κἀκείνοις, sc. τοῖς μόνον τὰς ὑλικάς, refers to the adherents of the more unlikely theory: cp. 5 a 26.[1] Even to them it might seem to be unreasonable if, the universe as a whole (**ὁ ... ὅλος οὐρανός**) and each and every part of it (**ἕκαστα** τῶν μερῶν **ἅπαντ**(α); ἅπαντα may express that the supposition concerns *all provinces* of nature: cp. ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις 7 a 16-7) actually being definite in various respects, there would be nothing of the kind in the principles. In this hypothetical (or at least, 'imagined') context the contrast between the orderliness of *all* (kinds of) things on the one hand, and the absence of *any kind* of definiteness in the principles on the other is effective as a polar statement (ἅπαντα vs. μηθέν, 7 a 13); contrast, with regard

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[1] Bergk's conjecture κἀκεῖνο (1886) 302 is therefore quite unnecessary (and implausible: see Most (1988) 224). In view of λαμβάνουσιν in 7 a 16 it would be nice if there is a plural (logical) subject in what precedes as well.—For the bold supposition that κἀκείνοις refers to the proponents of mixed principles (οἱ ... ἄμφω: Most (1988) 245 f.; also L-M), see below.

to the theory criticized, κατὰ τοὐλάχιστον ... ὡς εἰπεῖν (7 a 16), ἑκάστων αἱ φύσεις ὡς εἰπεῖν, 7 a 17-8 (see commentary *ad loc.*). For Th.' own scepticism towards the orderliness of each and every part of nature, see 7 a 19 – b 8 and 11 b 17 ff.

As may be inferred from ὡρισμένην τιν' ἔχουσι φύσιν ... καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν 10 b 21-3, the datives **καὶ μορφαῖς καὶ δυνάμεσιν καὶ περιόδοις** probably are not on a par with (ἐν) τάξει καὶ λόγῳ, but rather indicate (Th.' analysis of) the various respects in which this being **ἐν τάξει καὶ λόγῳ** ("in order and proportion") applies: see USENER (1890) and R-F *ad loc*; accordingly, it seems better to insert a comma (with L-M).

The order and proportion assumed in being as a whole and in each of its parts, then, concerns the shape of things (μορφαί, which may be equivalent to both σχῆμα and εἶδος), their capacity (δυνάμεις, presumably consisting in a special mix of elements),[1] and periodic recurrence (περίοδοι); this last feature obviously applies in the sphere of the heavenly bodies and of meteorological phenomena;[2] for organic nature, see

> Arist. *GC* 336 b 10-3 διὸ καὶ οἱ χρόνοι καὶ οἱ βίοι ἑκάστων ἀριθμὸν ἔχουσι καὶ τούτῳ διορίζονται· πάντων γάρ ἐστι τάξις, καὶ πᾶς βίος καὶ χρόνος μετρεῖται περιόδῳ, ...
>
> *GA* 777 b 16-20 εὐλόγως δὲ πάντων οἱ χρόνοι καὶ τῶν κυήσεων καὶ τῶν γενέσεων καὶ τῶν βίων μετρεῖσθαι βούλονται κατὰ φύσιν περιόδοις. λέγω δὲ περίοδον ἡμέραν καὶ νύκτα καὶ μῆνα καὶ ἐνιαυτὸν καὶ τοὺς χρόνους τοὺς μετρουμένους τούτους, ἔτι δὲ τὰς τῆς σελήνης περιόδους.
>
> *CP* I.13.1 ζητήσειε δ' ἄν τις ... πότερον τὰ δένδρα κατὰ χειμῶνα κύει πρὸς καρπογονίαν, τοῦ δ' ἦρος ἀποτίκτει, καὶ τοῦθ' οἷον περίοδός ἐστιν χρόνοις ὡρισμένοις, καθάπερ τοῖς ζῴοις, ἢ διὰ τὴν ἔνδειαν τῆς τροφῆς συμβαίνει καὶ διὰ τὴν ψυχρότητα τοῦ ἀέρος. (Also 13.3.)

Definiteness based on periodicity may be supposed also to apply to the cosmos as a whole:

> Arist. *Met.* 1072 a 7-12 (...) ὥστ' οὐκ ἦν ἄπειρον χρόνον χάος ἢ νύξ, ἀλλὰ ταὐτὰ ἀεὶ ἢ περιόδῳ ἢ ἄλλως, εἴπερ πρότερον ἐνέργεια δυνάμεως. εἰ δὴ τὸ αὐτὸ ἀεὶ περιόδῳ, δεῖ τι ἀεὶ μένειν ὡσαύτως ἐνεργοῦν. εἰ δὲ μέλλει γένεσις καὶ φθορὰ εἶναι, ἄλλο δεῖ εἶναι ἀεὶ ἐνεργοῦν ἄλλως καὶ ἄλλως.

Like *ἕκαστα* τῶν μερῶν *ἅπαντα* (see above), the enumeration of the various respects in which the "order and proportion" in the cosmos and its parts would apply, apparently is meant to bring out the absurdity of assuming that, nevertheless, in the principles there would be nothing of the kind (**μηθὲν**

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[1] See *ad* 10 b 21-3, p. 524-5 below.

[2] See 11 b 17-9; cp. p. 582.

τοιοῦτον: i.e., no order & proportion whatsoever of this kind): not even so much as, for instance, periodic order.

For the ἀλογία involved, cp. Arist. Fr. 17 Rose εἰ μὲν ἄτακτοι (αἱ ἀρχαί), ἀτακτότερα τὰ ἐξ αὐτῶν; see also Ps.-Arist. *MM* 1187 a 30 – b 2 *ad* συνακολουθεῖ 7 a 3 (pp. 291-2 above). Cp. the paradox which Aristotle finds in Democritus' explanation of sublunary and heavenly entities (in spite of the obvious difference in scope, since two kinds of φανερά are concerned, and the more authoritative ones are those higher in the hierarchy):

> Arist. *Phys.* 196 a 24 – b 5 εἰσὶ δέ τινες οἳ καὶ τοὐρανοῦ τοῦδε καὶ τῶν κόσμων πάντων αἰτιῶνται τὸ αὐτόματον· ἀπὸ ταὐτομάτου γὰρ γενέσθαι τὴν δίνην καὶ τὴν κίνησιν τὴν διακρίνασαν καὶ καταστήσασαν εἰς ταύτην τὴν τάξιν τὸ πᾶν. καὶ μάλα τοῦτό γε αὐτὸ θαυμάσαι ἄξιον· λέγοντες γὰρ τὰ μὲν ζῷα καὶ τὰ φυτὰ ἀπὸ τύχης μήτε εἶναι μήτε γίγνεσθαι, ἀλλ' ἤτοι φύσιν ἢ νοῦν ἤ τι τοιοῦτον ἕτερον εἶναι τὸ αἴτιον (οὐ γὰρ ὅ τι ἔτυχεν ἐκ τοῦ σπέρματος ἑκάστου γίγνεται, ἀλλ' ἐκ μὲν τοῦ τοιουδὶ ἐλαία ἐκ δὲ τοῦ τοιουδὶ ἄνθρωπος), τὸν δ' οὐρανὸν καὶ τὰ θειότατα τῶν φανερῶν ἀπὸ τοῦ αὐτομάτου γενέσθαι, τοιαύτην δ' αἰτίαν μηδεμίαν εἶναι οἵαν τῶν ζῴων καὶ τῶν φυτῶν. καίτοι εἰ οὕτως ἔχει, τοῦτ' αὐτὸ ἄξιον ἐπιστάσεως, καὶ καλῶς ἔχει λεχθῆναί τι περὶ αὐτοῦ. πρὸς γὰρ τῷ καὶ ἄλλως ἄτοπον εἶναι τὸ λεγόμενον, ἔτι ἀτοπώτερον τὸ λέγειν ταῦτα ὁρῶντας ἐν μὲν τῷ οὐρανῷ οὐδὲν ἀπὸ ταὐτομάτου γιγνόμενον, ἐν δὲ τοῖς οὐκ ἀπὸ τύχης πολλὰ συμβαίνοντα ἀπὸ τύχης· καίτοι εἰκός γε ἦν τοὐναντίον γίγνεσθαι.

The absence of order and proportion in the principles themselves is illustrated by (what is presented as) a quotation from Heraclitus (B 124.13-5 DK). The text of the quotation is a vexed question, the reading of the manuscript tradition (ὥσπερ σὰρξ εἰκῇ κεχυμένων ὁ κάλλιστος, ..., ὁ κόσμος)[1] being generally rejected.[2]

The possible ways of reading this quotation are limited by the condition that it should illustrate the mode of being of the basic principles—*as opposed to* the cosmos as a whole and its constituent parts, which *are* assumed to be 'in order and proportion' by the philosophers in question (see 7 a 15 ff.). This seems to rule out, in the first place, the reading σωρῶν proposed by MOST "just like the most beautiful of the heaps piled at random [is] the world-order" (1988) 247, which has the effect of putting the randomness in the cosmos as a whole rather than in its principles.

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[1] The problem involved in σάρξ is brought out most clearly by the conjecture σὰρξ εἰκῇ κεχυμέν⟨η ἀνθρώπ⟩ων ὁ κάλλιστος, FRIEDLAENDER (1942).

[2] But see now VIANO (1992): ὥσπερ σάρξ, εἰκῇ κεχυμένων ὁ κάλλιστος (sc. κόσμος), φησὶν Ἡράκλειτος, ὁ κόσμος. (471).

I agree that the conjecture makes attractive Greek; see also MOST's references (*l.c.*) to parallels for the diction in the fragments of Heraclitus. Taking into account Th.' argument, the best one can do would seem to be to suppose that his quotation is not quite faithful to the original—whether owing to a selective memory or through conscious adaptation to the present argument.[1] See below.

Viewed in this perspective, a noun in the singular meaning something like 'conglomeration', 'heap' (cp. the conjectures σάρμα, σάρον, σωρός, above), which is justifyable from a textcritical point of view, would be acceptable, yielding the paradox that the most beautiful of all (**ὁ κάλλιστος** for the champion in the contest of beauty) is a conglomeration of constituents "poured out at random" (**εἰκῇ κεχυμένων**), i.e. without any rational arrangement at all: a paradox applying to the universe, which beyond all doubt is "**κόσμος**", the incarnation of beautiful arrangement. (For the genitive, cp. Hom. *Il.* 1.315 ἑκατόμβας ταύρων ἠδ' αἰγῶν, Aristoph. *Ach.* 992 στέφανον ἀνθέμων, Xen. *Cyr.* 6.1.29 τὸν δὲ δίφρον τοῖς ἡνιόχοις ἐποίησεν ὥσπερ πύργον ἰσχυρῶν ξύλων).[2] In Th.' use of the quotation, in any case, the constituents implied obviously are the ἀρχαί lacking all kinds of order as assumed by the adherents of unformed, material principles.

Cp. K-G II.81 Anm. 2 "Der Genetiv des Partizips steht bisweilen ohne Substantiv, wenn dasselbe aus dem Zusammenhange leicht ergänzt werden kann, oder wenn es in dem Partizipe selbst liegt, ...".[3]

ὥσπερ could thus belong to the quotation—which would make it a comparison rather than a paradox—, but more likely it is part of Th.' own embedding of the fragment, this being presented as the consequence which follows from the situation or, as here, from the point of view under discussion: cp. ὥσπερ ἑκάτερα κεχωρισμένα 4 a 11-2; see also p. 248 above.

It seems likely, then, that Th. adduces the paradox to illustrate the absurdity of the position of the adherents of material principles only, which was recognized by Heraclitus too, who is adduced here either (i) as one of those who

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[1] MOST himself, referring to the quotation from the *Iliad* in 5 b 17 and the apparent use of a Euripidean text in 8 a 26-7, reckons with the possibility "that Theophrastus' access to these classic texts was not direct, but was mediated by predecessors who had cited these passages for their own purposes. Such mediation cannot be excluded in the case of this citation from Heraclitus either." (1988) 256 n. 110.

[2] SCHW. II.129; K-G I.376.

[3] Because we are concerned with the interpretation of Th.' text rather than with a reconstruction of the original—a potential divergence between these two activities being of secondary importance as compared with a consistent interpretation of Th.' argument—there is no reason to reject the construction as "implausibly sophisticated for archaic Greek prose"; *contra* MOST (1988) 246: "in Aristotle or Theophrastus himself, such a construction would be unremarkable, but there is certainly no parallel for it in Heraclitus and apparently none in any other early prose author."

fail to recognize the λόγος (or, τάξις) at the level of the principles, but bears testimony to the paradoxical nature of this position, or (ii) as a fellow-critic of those (whether colleagues or laymen)[1] who fail to recognize this λόγος.[2]

Now, we do have ample evidence that Heraclitus did assume a λόγος in cosmic processes according to which one element is the exchange for another (e.g. B 31.6-14 DK: πυρὸς τροπαὶ πρῶτων θάλασσα, θαλάσσης δὲ τὸ μὲν ἥμισυ γῆ, τὸ δὲ ἥμισυ πρηστήρ. ... ⟨γῆ⟩ θάλασσα διαχέεται, καὶ μετρέεται εἰς τὸν αὐτὸν λόγον, ὁκοῖος πρόσθεν ἦν ἢ γενέσθαι γῆ), the principle of fire being responsible for the order in the cosmos as a whole: see B 64.1-2 DK: τὰ δὲ πάντα *οἰακίζει* Κεραυνός, τουτέστι *κατευθύνει*, κεραυνὸν *τὸ πῦρ* λέγων τὸ αἰώνιον. The point of Heraclitus' paradox seems to be rather that the λόγος pervading the cosmos is not easily distinguished: cp. B 123.8-9 DK: φύσις ... κρύπτεσθαι φιλεῖ.

κεχυμένων has a Heraclitean ring, as if the heap (or whatever) of things poured out at random is the solid counterpart, as it were, of the famous river: see διαχέεται in B 31.12 above; also A 1, 141.25 ff. DK:

> πυκνούμενον γὰρ τὸ πῦρ ἐξυγραίνεσθαι συνιστάμενόν τε γίνεσθαι ὕδωρ, πηγνύμενον δὲ τὸ ὕδωρ εἰς γῆν τρέπεσθαι· καὶ ταύτην ὁδὸν ἐπὶ τὸ κάτω εἶναι. πάλιν τε αὖ τὴν γῆν *χεῖσθαι*, ἐξ ἧς τὸ ὕδωρ γίνεσθαι, ἐκ δὲ τούτου τὰ λοιπά, σχεδὸν πάντα ἐπὶ τὴν ἀναθυμίασιν ἀνάγων τὴν ἀπὸ τῆς θαλάττης· αὕτη δέ ἐστιν ἡ ἐπὶ τὸ ἄνω ὁδός.

—with the result that the participle κεχυμένων would obviously refer to the elementary principles in Heraclitean context too.

The question, then, is whether Th. believes Heraclitus to be one of those who assume that as far as the principles are concerned the situation is "ὁμοῦ πάντα", as Aristotle puts it (*Met.* 1069 b 21)—which means, in Aristotelian terms, that in the principles there is potential existence only—or sees him as the exception among the physiologists in this respect.

It should be noted that the division between the extreme positions made in the preceding paragraph is not conclusive, since (as has been said above) in 6 b 24-7 a division is made between two *kinds of principles to be distin-*

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[1] So DK *ad loc.*: "Sinn wohl: so erschient sie der Menge, die den Logos nicht begreift". For the critical nature of some of the statements ascribed to Heraclitus, see Frr. I-VIII Kahn (= B 1, 34, 2, 17, 71, 89, 18, 22 DK).

[2] Note that neither one of these possibilities seems to bear out the contention that Th. is one of the ancient writers who "put Heraclitus down as little more than an eccentric: Aristotle, followed by Theophrastus, seems to have seen him as a deranged denier of the law of non-contradiction, who in more lucid moments sketched an incomplete cosmology in Milesian style.", Hussey (1982) 35.
For the possibility of Th.' assessment of Heraclitus having been more positive than that made by his predecessor see van Raalte (1988) 205.

guished, (a) unshaped principles or (b) principles endowed with shape, whereas here in 7 a 6 ff. a distinction is made—given these two kinds of principles—between three kinds of *positions actually taken*, of those assuming (b) only, of those assuming (a) only, and of those assuming both (b) and (a).

If, therefore, Th. did not recognize Heraclitus' principle of fire as the principle of exchange within the cosmos,[1] one might suppose him to cite the paradox inherent to the quotation from Heraclitus (being a form of ἀτοπία) as an indication that the obvious ἀλογία of this point of view was recognized even by those adhering to it.

If, on the other hand, Th. did recognize Heraclitus as an adherent of material principles with an inherent principle of proportion, there is no reason why in IV.1 he should not fall in with possibility (a)—especially since μόνον τὰς ὑλικάς seems to be more limited than ἀμόρφους καὶ οἷον δυναμικάς: see preceding note—, and here in IV.2 he should not be subsumed under those taking position (a) + (b).

Contra MOST, who to my mind twists the argument: "there can be no doubt that the group of materialists includes Heraclitus (he is certainly among those *hosoi pur kai gên*, 6b25-26), so that in Ross's view he is one of the *ekeinoi*. But the materialist position, which these *ekeinoi* would find absurd, is illustrated precisely by a citation from Heraclitus (...), so that Theophrastus would be saying that Heraclitus would find one of Heraclitus' own aphorisms absurd." (1988) 244. Accordingly MOST assumes that κἀκείνοις refers to the last, mixed group (οἱ ... ἄμφω), who, like the first one (οἱ ... ἐμμόρους πάσας: hence κἀκείνοις), would find fault with the position which combines the shapelessness of principles with a cosmos characterized by order and proportion.

There remains the difficult question of exactly how Heraclitus must be thought to have stated the point he is supposed to be making; the actual words used by Heraclitus in making the statement will not concern us here. This problem not only concerns the manuscript reading of σάρξ, but also the relationship between **ὁ κάλλιστος** and **ὁ κόσμος**.

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[1] As KERSCHENSTEINER (1955) 403 f. seems to argue: " [...] für Theophrast kann [das Wort 'Kosmos'] nichts anderes sein als die festgefügte Welt gemäss dem statischen System des Aristoteles, in der jedes Element seinen bestimmten Platz hat—bei Heraklit dagegen findet der Austausch der Elemente in ständiger Bewegung statt. Theophrast las aus seinen Worten eine Lehre vom Aufgehen im Urstof heraus [...], und entnahm den Worten ἁπτόμενον μέτρα καὶ ἀποσβεννύμενον μέτρα eine dem peripatetischen Begriff zeitlicher Ordnung entsprechende Periodizität. Die bei Heraklit anschliessenden Worte von den Wenden des Feuers bedeuten nicht einen Umschlag 'Kosmos-Feuer', wie man ihn später hineininterpretierte, sondern sprechen von den stofflichen Verwandlungen des Feuers, das mit dem Kosmos identisch ist. Auch in Theophrasts Auslegung bleibt deutlich, dass es sich nicht um einen Wandel des Kosmos, sondern einen Wandel *im* Kosmos handelt."; see also *ibid.* 409 f.

My proposal is to take ὁ κάλλιστος independently (i.e., with an implied πάντων), expressing the supreme position with regard to beauty in terms of the winner of a contest—to be identified, Heraclitus says, with the cosmos.[1] The idea of a contest for superiority between constituents of the cosmos can be ascribed to Heraclitus on the testimony of Plato (*Hipp. mai.* 289 A-B): πιθήκων ὁ κάλλιστος αἰσχρὸς ἀνθρώπων γένει συμβάλλειν B 82.15-6 DK), and ἀνθρώπων ὁ σοφώτατος πρὸς θεὸν πίθηκος φανεῖται καὶ σοφίᾳ καὶ κάλλει καὶ τοῖς ἄλλοις πᾶσιν (B 83.17-8 DK). This outcome, not very remarkable in itself (the notion of beauty being inherent in the term κόσμος itself),[2] is made into a Heraclitean paradox by the characterization of this champion as a conglomerate of things randomly poured out.

As was said above, as far as Heraclitus is concerned, MOST's proposal of σωρῶν may do very well, the paradox being between the beauty inherent in the conception (or, term) of κόσμος and its (apparently) random nature. The present passage, however, requires a statement concerning the random nature of the principles in particular, as opposed to that of the cosmos as a whole, and this pleads in favour of a noun in the singular which is specified by εἰκῇ κεχυμένων said of the constituent principles. One might, therefore, venture the conjecture that, *if* Heraclitus' paradox contained a plural genitive—σωρῶν, for instance—, Th. modified the original so as to suit his purpose (or actually remembered the paradox in this more suitable version) and read a singular nominative: σωρός, for instance.

As far as Th. is concerned, the reading σωρός is not unlikely, because in Aristotelian context not infrequently the term is used with reference to a "heap" exemplifying the idea of a non-unified whole (see e.g. *Met.* 1044 a 2-5 καὶ τὸν ἀριθμὸν δεῖ εἶναί τι ᾧ εἷς, ὃ νῦν οὐκ ἔχουσι λέγειν τίνι εἷς [εἴπερ ἐστὶν εἷς][3] ἢ γὰρ οὐκ ἔστιν ἀλλ' οἷον σωρός, ἢ εἴπερ ἐστί, λεκτέον τί τὸ ποιοῦν ἓν ἐκ πολλῶν: cp. also *GC* 325 b 22 τὸ σωρευόμενον μέγεθος, "the accumulated mass of the elements", tr. FORSTER); this is precisely why it is, at the same time, not quite apposite, in so far as the implausibility to be illustrated consists in the very contrast between the cosmos, the unified whole

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[1] Cp. Thales A 1, I.71.11 DK: κάλλιστον κόσμος· ποίημα γὰρ θεοῦ. (That Heraclitus disagrees with the latter part of this statement may be inferred from B 30 DK.)

[2] Cp. KRANZ (1958) 254: "eine andere Nuance von 'Wohlordnung' ist 'Schmuckordnung; schmuckvolle Ordnung', denn sinnvolle Ordnung ist hellenisch gesehen immer zugleich auch ein Schmuckgebilde, so wie sie auch einen ethischen Wert ausdrücken kann. Sie gehört eben zum weiten Gebiet des Begriffes Καλόν."

Cp. Gorg. B 11, II.288.1-2 DK κόσμος πόλει μὲν εὐανδρία, σώματι δὲ κάλλος, ψυχῇ δὲ σοφία, πράγματι δὲ ἀρετή, λόγῳ δὲ ἀλήθεια.

[3] Secl. Jaeger.

par excellence, and the supposed randomness of its constituent principles. Noticeably σάρξ in this context is actually contrasted with σωρός:

> Arist. *Met.* 1041 b 11-9 ἐπεὶ δὲ τὸ ἔκ τινος σύνθετον οὕτως ἓν εἶναι τὸ πᾶν, *ἀλλὰ μὴ ὡς σωρός, ἀλλ' ὡς ἡ συλλαβή—ἡ δὲ συλλαβὴ οὐκ ἔστι τὰ στοιχεῖα, οὐδὲ τῷ βα ταὐτὸ τὸ β καὶ α, οὐδ' ἡ σὰρξ πῦρ καὶ γῆ*· διαλυθέντων γὰρ τὰ μὲν οὐκέτι ἔστιν, οἷον ἡ σὰρξ καὶ ἡ συλλαβή, τὰ δὲ στοιχεῖα ἔστι, καὶ τὸ πῦρ καὶ ἡ γῆ. ἔστιν ἄρα τι ἡ συλλαβή, οὐ μόνον τὰ στοιχεῖα τὸ φωνῆεν καὶ ἄφωνον, ἀλλὰ καὶ ἕτερόν τι· καὶ *ἡ σάρξ οὐ μόνον πῦρ καὶ γῆ ἢ τὸ θερμὸν καὶ ψυχρόν, ἀλλὰ καὶ ἕτερόν τι*—... (Cp. also 1070 b 15.)

All this, I think, suggests that as far as Heraclitus is concerned MOST may be right in conjecturing σωρῶν; that Th. wrote σωρός (as USENER conjectured); and that the manuscript tradition goes back to some scribe who found fault with σωρός as a characterization of the cosmos (which in a way does spoil Th.' point) and who, having in mind the Aristotelian distinction, substituted σάρξ as the more suitable alternative.

7 a 15-9 καὶ κατὰ τοὐλάχιστον ... ἀορίστους εἶναι.

τοὐλάχιστον J; τοῦ λάχιστον C; τοῦ ἐλάχιστον A; τοῦτο ἐλάχιστον L; τοὐλάχιστου P.

This sentence affirms that the hypothetical situation outlined above actually applies: the adherents of material principles only (the referent of κἀκείνοις being the grammatical subject here)[1] actually hold this view: **λαμβάνουσιν** sc. οὕτως (εἶναι), 'as outlined above', the grounds for this statement being given in ὡρισμέναι γὰρ κ.τ.λ. 7 a 17); for the use of the verb cp. *HP* III.2.4 ὁ μὲν οὖν τῶν ἀγρίων ἀφορισμὸς εἴθ' οὕτως ἢ καὶ ἄλλως ληπτέος; see also *ad* 11 b 25. They do so even with regard to the tiniest entity: **κατὰ τοὐλάχιστον**[2] (cp. ἕκαστα τῶν μερῶν, 7 a 11, ἑκάστων αἱ φύσεις, 7 a 17-8); the article prevents the phrase from being interpreted as the superlative of κατὰ μίκρον.

The choice between the accusative and the genitive (the reading of P) is not easy. For the genitive, cp. perhaps

> Arist. *Meteor.* 356 b 30-2 ἔλαβον δὲ ταύτην τὴν διάνοιαν κατὰ τῆς θαλάττης ἐκ τοῦ πολλοὺς τόπους φαίνεσθαι ξηροτέρους νῦν ἢ πρότερον·...
>
> Ps.-Arist. *Rhet. ad Alex.* 1431 b 9-10 ἡ μὲν οὖν δόξα τοῦ λέγοντός ἐστι τὸ τὴν αὑτοῦ διάνοιαν ἐμφανίζειν κατὰ τῶν πραγμάτων.

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[1] *Pace* L-M, *ad loc.*

[2] The crasis may be due to the established adverbial use of τοὐλάχιστον in the sense of "at the least".

However, as the case-ending of τοὐλάχιστου is easily understandable as caused by assimilation to the crasis (which in its turn may be on the analogy of the frequent use of τοὐλάχιστον in adverbial sense ("at the least": LSJ s.v.); note the accentuation too), the accusative (adopted by R-F, L-M) seems to be preferable.

ὡς εἰπεῖν (7 a 16, see also 18) qualifies the absoluteness of a statement, frequently with regard to quantity or degree,[1] e.g. (ἅ)πανθ' ὡς εἰπεῖν *Od.* 27, 68; *CP* I.10.6, 16.2; II.1.5, 2.2, *et passim*; οὐδεμίαν ὡς εἰπεῖν, *CP* I.1.3, cp. 13.12; κατὰ μίαν ὡς εἰπεῖν ὥραν *CP* I.14.3; μᾶλλον ὡς εἰπεῖν, *Sens.* 19, *Od.* 5; καὶ μάλισθ' ὡς εἰπεῖν *CP* I.14.1; τιμιώτατον ὡς εἰπεῖν, *CP* I.22.4; τὰ δὲ στέριφα καὶ ὀλιγόκαρπα χρονιώτερα ὡς εἰπεῖν, *CP* II.11.1. As distinct from ὡς ἁπλῶς εἰπεῖν, which indicates that an expression is used (or a statement made) without regard to potentially relevant distinctions (see 4 b 20, and note *ad loc.*), ὡς εἰπεῖν rather indicates that the statement may not apply to all cases potentially included. This scrupulousness (as to the absoluteness of τοὐλάχιστον and *ἑκάστων* αἱ φύσεις respectively), which is more likely to be Th.' own than to reflect a restriction made by the philosophers referred to, stands in noticeable contrast to the polarity of the more theoretical counterpart of this statement, 7 a 11 ff.

ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις adds by way of specification that these philosophers take this situation to apply to all kinds of natural entities (cp. 9 a 12-5 τὰ κινητὰ καὶ ὑπὸ τὴν φύσιν, αὐτῶν τε τούτων τὰ ἐν ἀρχῇ καὶ ⟨τὰ⟩ ἑπόμενα, μέχρι ζῴων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων) alike; in this respect it may parallel ἅπαντα in 7 a 12. The word order suggests that the insistence on the omnipresence of determinateness is most significant in the case of animate things: see 10 b 20-3: ἔτι δ' ἐν τοῖς φυτοῖς καὶ μᾶλλον τοῖς ἀψύχοις *ὡρισμένην τιν' ἔχουσι φύσιν* (ὥσπερ δοκοῦσιν) *καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν*, κ.τ.λ., with commentary *ad loc.*, pp. 522 ff.

The part in which the grounds for the preceding assertion (introduced by **γάρ**) are given, shows a shift from direct (**ὡρισμέναι** sc. εἰσί) to indirect speech (**ἀορίστους εἶναι**; for the ellipsis of φασι (or the like), cp. τὰ γὰρ ὄντα μόνον περὶ τὰς ἀρχάς, 6 b 17); the position of the contrasting terms at the beginning and at the end of the two clauses seems to emphasize the unlikelihood of this view.

For **ἑκάστων αἱ φύσεις ὡς εἰπεῖν**, which constitutes the justification for the assertion κατὰ τοὐλάχιστον ... ὡς εἰπεῖν in 7 a 16, see above.

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[1] *Contra* L-M: "L'ironie est soulignée (ὡς εἰπεῖν, a16 et 18)."

καίπερ αὐτομάτως γινομένων apparently states the height of ἀλογία:[1] it does not at all make sense to assume that creatures generated spontaneously, in which supposedly an internal principle of form is lacking,[2] have a determinate nature, while at the same time assuming the principles (from which all other creatures are likely to derive their form) to be indefinite.

Among the physiologists who may be meant, the theory of spontaneous generation is attested both for Anaximander and for Anaxagoras:[3]

Anaximander A 11, I.84.15-6 DK τὰ δὲ ζῷα γίνεσθαι ⟨ἐξ ὑγροῦ⟩ ἐξατμιζομένου ὑπὸ τοῦ ἡλίου.

Anaxag. A 42, II.17.6-7 DK ζῷα δὲ τὴν μὲν ἀρχὴν ἐν ὑγρῷ γενέσθαι, μετὰ ταῦτα δὲ ἐξ ἀλλήλων· ...[4]

Th. himself supplies evidence for the theory in the case of Anaxagoras and Diogenes of Apollonia:

HP III.1.4 ταύτας τε δὴ τὰς γενέσεις ὑποληπτέον εἶναι τῶν ἀγρίων καὶ ἔτι τὰς αὐτομάτους, ἃς καὶ οἱ φυσιολόγοι λέγουσιν· Ἀναξαγόρας μὲν τὸν ἀέρα πάντων φάσκων ἔχειν σπέρματα καὶ ταῦτα συγκαταφερόμενα τῷ ὕδατι γεν-

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[1] The phrase, then, is restrictive with respect to ἑκάστων, by singling out the most significant instances; for the 'scalarity' involved in the use of περ, see Bakker (1988).—Alternatively, the referent of γινομένων might be supposed to be more or less *ad sensum*, ἑκάστων in this context having the connotation of implausiblity: each and every entity, i.e. including the most unpromising ones (cp. κατὰ τοὐλάχιστον). There seems, in any case, to be no reason to suppose that, because ἑκάστων is co-extensive with ἕκαστα in 7 a 11 and ἑκάστοις in 7 a 20, αὐτομάτως γινομένων cannot refer to spontaneous generation but should rather be interpreted in a broader sense, as in the case of τῷ αὐτομάτῳ in 10 b 27 (*contra* L-M *ad loc.*).

[2] "The 'embryo' does not, in spontaneous generation, have the 'source of *form*' in itself. Thus, in explaining such developments, one must point to determinants beyond the nature of the developing organism itself.", Lennox (1982) 225.

[3] Anaxagoras' inclusion here depends on the interpretation of his views, which was apparently discussed by Th.: 228A.21-6 FHS&G (= Simpl. *In Phys.* 184 b 15): "καὶ οὕτω μέν", φησί, "λαμβανόντων δόξειεν ἂν ὁ Ἀναξαγόρας τὰς μὲν ὑλικὰς ἀρχὰς ἀπείρους ποιεῖν, τὴν δὲ τῆς κινήσεως καὶ τῆς γενέσεως αἰτίαν μίαν τὸν νοῦν· εἰ δέ τις τὴν μῖξιν τῶν ἁπάντων ὑπολάβοι *μίαν εἶναι φύσιν ἀόριστον καὶ κατ' εἶδος καὶ κατὰ μέγεθος*, συμβαίνει δύο τὰς ἀρχὰς αὐτὸν λέγειν *τήν τε τοῦ ἀπείρου φύσιν* καὶ τὸν νοῦν· ὥστε φαίνεται *τὰ σωματικὰ στοιχεῖα* παραπλησίως ποιῶν Ἀναξιμάνδρῳ.": in the second interpretation the principle of νοῦς is not an internal, elementary principle, and as a consequence Anaxagoras could be subsumed under οἱ ... μόνον τὰς ὑλικάς (7 a 7: see commentary *ad loc.*).

[4] This passage apparently rather concerns the origin of life as such: "the belief that all living things were originally born from the earth was very common among the Greeks. This was their way of getting over the difficulty of bringing life into being in the first place, when it could not have been produced as it is now, by procreation from already existing animals and men. It was the more easily adopted because to them it seemed a fact of observation that certain small creatures like maggots were still spontaneously generated", Guthrie I.385-6.

νᾶν τὰ φυτά·[1] Διογένης δὲ σηπομένου τοῦ ὕδατος καὶ μίξιν τινὰ λαμβάνοντος πρὸς τὴν γῆν (sc. γεννᾶν τὰ φυτά).

The list of Th.' works in Diogenes Laertius includes a treatise περὶ τῶν αὐτομάτων ζῴων (D.L. V.46; 350.5c FHS&G);[2] the view that some locusts are generated spontaneously is criticized in 359A.30-2 FHS&G (*On Creatures that Appear in Swarms*). Surely, "although he sees very clearly that many cases of what was believed to be spontaneous generation are not such, Theophrastus does not reject the notion of spontaneous generation itself";[3] see e.g.

CP I.5.1-2 αἱ δ' αὐτόματοι (sc. γενέσεις) γίνονται μέν (ὡς ἁπλῶς εἰπεῖν) τῶν ἐλαττόνων καὶ μάλιστα τῶν ἐπετείων καὶ ποιωδῶν· οὐ μὴν ἀλλὰ καὶ τῶν μειζόνων ἔστιν ὅτε συμβαίνουσιν, ὅταν ἢ ἐπομβρίαι κατάσχωσιν ἢ ἄλλη τις ἰδιότης γένηται περὶ τὸν ἀέρα καὶ τὴν γῆν· οὕτω γὰρ κ.τ.λ. (2) αἱ δ' ἐπομβρίαι καὶ σήψεις τινὰς ποιοῦσιν καὶ ἀλλοιώσεις, ἐπὶ πολὺ διικνουμένου τοῦ ὑγροῦ, καὶ τρέφειν καὶ ἐπαύξειν δύνανται τὰ συνιστάμενα, θερμαίνοντος τοῦ ἡλίου καὶ καταξηραίνοντος, ὥσπερ καὶ τὴν τῶν ζῴων γένεσιν οἱ πολλοὶ ποιοῦσιν.

IV.4.10 (...) καὶ ἄνευ σπερματικῆς ἀρχῆς αὐτόματα πολλὰ συνίσταται καὶ τῶν ἐλαττόνων καὶ τῶν μειζόνων φυτῶν.

For Th.' use of τῷ αὐτομάτῳ referring to natural processes in general, and his own distinction between the different applications of the term, see *ad* 10 b 27.

7 a 19-22 χαλεπὸν δὲ ... πομφόλυγι·

αὐτὸ ⟨τὸ⟩ BRANDIS (1860) 332 n. 271, USENER (1861) 276; αὐτὸ MSS.; αὖ τὸ ZELLER II.2.823 n.3.

The idea that a λόγος could be ascribed to things with reference to a final cause is not without its difficulties too (or, either). About the relation of this sentence to the preceding section opinions differ.

It has been supposed that, after the thesis in which the position of the materialists was criticized (7 a 10-9), this is the antithesis of the argument, in which Th. turns against the formalists (οἱ ... ἐμμόρφους πάσας, 7 a 6-7): see ELLIS (1988) 221 ff.; also L-M: "πάλιν αὖ ... se tourne alors contre la position des formalistes (et la téléologie qui lui est liée" (n. 113 *ad* 7 a 13-4). According to L-M, the following

[1] In *CP* I.5.2 a phenomenon which is supposed to be at the base of this theory of Anaxagoras is identified as generation from imported seeds rather.

[2] Cp. also 383.1-2 FHS&G (= Geopon. 15.1.20) Θεόφραστος καὶ Ἀριστοτέλης φασὶ τὰ ζῷα οὐ μόνον ἐξ ἀλλήλων γεννᾶσθαι, ἀλλὰ καὶ αὐτόματα γίνεσθαι, καὶ ἀπὸ τῆς γῆς σηπομένης· ...

[3] LLOYD (1973) 14.

πλὴν εἰ κ.τ.λ. (7 a 22 ff.) however does suggest "un modèle général d' explication possible sur la base d'une position fondamentalement dualiste, qui limite les prétentions respectives du formalisme et du matérialisme." (n. 121 *ad* 7 a 22 ff.).

In the first place it should be noted that the decision one makes as to the text-critical problem involved (see above) does not affect the question whether a contrast ("on the other hand" R-F;[1] "inversement" L-M) or a further point ("but again") is involved: both the reading πάλιν αὖ τὸ ... (adopted by R-F, L-M), and πάλιν αὐτὸ τὸ ... allow of either interpretation:
(1) introducing a contrast: πάλιν αὖ

> *CP* I.17.9 ἐπεὶ καθ' ἡλικίαν ὀψικαρπότερα, καὶ μὴ κατὰ τὰς ἐνιαυσίους ὥρας, οἷον τὰ νέα τῶν φυτῶν διὰ πλῆθος ὑγρότητος καὶ τὸ ὅλον τροφῆς ὀψίκαρπα· τὰ δ' *αὖ πάλιν* ὡς ὀψιφόρα πόρρω τῆς ἡλικίας ὄντα, καθάπερ ...[2]

when the contrast is more explicitly stressed, πάλιν only:

> *CP* I.12.4 ταύτῃ μὲν οὖν δόξειεν ἂν μερίζεσθαι τὸ τῆς αὐξήσεως. τῇδε δὲ πάλιν οὐκ ἂν δόξειεν· ...[3]

(2) introducing a further point, or a next group: πάλιν αὖ

> *CP* I.16.9 καθάπερ τῷ σιλφίῳ καὶ τῇ καππάρει καὶ εἴ τι ἄλλο φεύγει τὴν ἐργασίαν, ἢ εἴ τι πάλιν αὖ διώκει τὴν ξηρὰν καὶ ὑγρὰν καὶ χειμερινήν.[4]

πάλιν only:[5]

> *CP* I.12.5 ἐπεὶ καὶ ἄτοπον εἰ τὸ θρεπτικόν, ὃ δὴ διαπλάττει καὶ δίδωσιν τροφάς, διαιρεῖται κατὰ μέρη τὴν ἐνέργειαν, ἢ πάλιν εἴ τι τῶν σωματικῶν τὸ ἐνεργοῦν, οἷον πνεῦμα ἢ πῦρ, οὐδὲ γὰρ ταῦτα εἰκός.[6]
>
> I.16.10 αὐτοῦ δὲ τοῦτο τάχ' ἄν τις πάλιν ἀπορήσειεν ...[7]

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[1] In the summary R-F have "at the same time" (xv).

[2] "Indeed there are late fruiting trees in which the lateness is a matter of their period of life, and not of the annual seasons, such as young trees, which fruit late in this sense because of their abundance of fluid and in general of food; again, on the other hand, there are those which count as late bearing because they fruit when far advanced in age, as ..." tr. EINARSON/LINK.

[3] "All this, then, would make it appear that growth is carried on by taking turns. What follows would on the contrary make this appear not so." tr. EINARSON/LINK.

[4] "as with silphium, caper and others that dislike tendance, and so again with any that seek out dry or wet and wintry country." tr. EINARSON/LINK.

[5] Cp. BONITZ 559 b 13-4 s.v. "πάλιν omnino progressum in narrando enumerando quaerendo significat".

[6] "Indeed it would be strange if the nutritive faculty, which forms the plant and feeds what it has formed, should exercise its activity by turning from one part to another; or again, supposing that what carries out this activity is something corporeal, as *pneuma* or fire, that this corporeal thing should do so, for it is unlikely that these should operate in this way either." tr. EINARSON/LINK.

[7] "But starting from this last point one could perhaps raise a further problem, ..." tr. EINARSON/LINK.

Ign. 6 εἰ δὲ μή ἐστι πῦρ μηδὲ πυρὸς φῶς, αὐτὸ μὲν τοῦτο θαυμαστὸν καὶ λόγου δεῖται. εἰ δὲ μήθ' ὑπὸ τούτου (sc. the sun) καὶ διὰ τοῦτον ἡ θερμότης, ἐκεῖνο γε φανερόν, ὡς ἐν ὑποκειμένῳ τινὶ καὶ τὸ πῦρ καὶ ὁ ἥλιος τὸ θερμόν. ἄτοπον δὲ καὶ τοῦτο *πάλιν*, εἰ ἡ ἀρχὴ καὶ τὸ πρῶτον ἐν ὑποκειμένῳ· ...[1]

The relation of the present assertion to the preceding criticism of the materialist's point of view thus depends entirely on one's views about its reference & interpretation. Now to begin with, it seems likely that some comment concerning one of the positions previously mentioned is involved; and taking into account the patient (made explicit by **ἑκάστοις**) of the activity—not to mention the reference to τὸ ἕνεκά του—, one might feel justified in conjecturing that the third, 'Aristotelian' position of οἱ δ' ἄμφω (7 a 7 ff.) is meant; the familiarity of this position would be a point in favour of **αὐτὸ τὸ** ... περιθεῖναι, a favourite way of expressing himself of Th. anyway: see *ad* 4 b 4, p. 116 above. It seems preferable, therefore, to read πάλιν (rather than πάλιν αὖ); see also below.

The point at issue thus seems to be that it is difficult to 'surround' things with their "λόγοι" (for **λόγους περιθεῖναι** cp. 4 a 23, of mathematical proportions; also τῷ μορφοῦσθαι κατὰ τοὺς λόγους, 8 a 13-4)[2] by referring to the final cause involved (**τὸ ἕνεκά του**) in all cases. This apparently is an objection against the theory which holds that a "formal account"[3] of things can be established by identifying a final cause in each case, this final cause being conceived as the internal[4] φύσις or οὐσία of the entity in question: compare e.g.

Arist. *PA* 641 a 21-7 (τοῦ φυσικοῦ περὶ ψυχῆς ἂν εἴη λέγειν καὶ εἰδέναι, ... ἄλλως τε καὶ) τῆς φύσεως διχῶς λεγομένης καὶ οὔσης τῆς μὲν ὡς ὕλης τῆς δ' *ὡς οὐσίας*. καὶ ἔστιν αὕτη καὶ ὡς ἡ κινοῦσα καὶ ὡς τὸ τέλος.

641 b 23-6 πανταχοῦ δὲ λέγομεν τόδε *τοῦδε ἕνεκα*, ὅπου ἂν φαίνηται τέλος τι πρὸς ὃ ἡ κίνησις περαίνει μηδενὸς ἐμποδίζοντος. ὥστε εἶναι φανερὸν ὅτι ἔστι τοιοῦτον, ὃ δὴ καὶ καλοῦμεν *φύσιν*.

The use of the aorist περιθεῖναι signifies that the focus is on the aim which cannot easily be accomplished rather than on the manner in which (according to the theory under discussion) this could be done, the latter being ex-

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[1] "But if the sun is not fire nor the light from fire, we have a surprising outcome and one calling for explanation. And if heat does not come about through the sun's agency, then plainly fire and heat are bound up in a substrate. This in turn is absurd, if an origin and a primary are bound to a substrate; ...", tr. COUTANT.

[2] For περι- cp. ἐμπεριλαμβάνεσθαι, περίληψις in the passages from Arist. *GA* quoted below.

[3] Cp. e.g. Arist. *Phys.* 190 a 16-7 τὸ γὰρ εἴδει λέγω καὶ λόγῳ ταὐτόν.

[4] Cp. ἐμμόρφους 7 a 8, and commentary *ad loc.*, pp. 296-7 above.

pressed by the present participle **συνάγοντας**.[1] The rational account for each entity supposedly could be established by means of reference to the final cause in question, a final cause which obtains for a particular class of things: hence apparently *συνάγοντας*: cp. Arist. *Met.* 986 b 5 συνάγειν (sc. the (ten) Pythagorean principles) πρὸς τὰς εἰρημένας αἰτίας (sc. the four Aristotelian causes); *Sens.* 437 a 21 πρὸς τέτταρα πέντ' οὔσας συνάγειν; for the idea of a τάξις (see τάξει καὶ λόγῳ 7 a 12) or φύσις being inherent in particular entities which varies according to the class involved, cp. Arist. *Met.* 1075 a 11-25 (πρὸς μὲν γὰρ ἓν ἅπαντα συντέτακται, ἀλλ' ὥσπερ ἐν οἰκίᾳ τοῖς ἐλευθέροις ἥκιστα ἔξεστιν ὅ τι ἔτυχε ποιεῖν, ἀλλὰ πάντα ἢ τὰ πλεῖστα τέτακται, τοῖς δὲ ἀνδραπόδοις καὶ τοῖς θηρίοις μικρὸν τὸ εἰς κοινόν, τὸ δὲ πολὺ ὅ τι ἔτυχεν· τοιαύτη γὰρ ἑκάστου ἀρχὴ αὐτῶν ἡ φύσις ἐστίν), quoted *ad* κοινωνία 4 a 10, p. 88 above.

The problem with this theory is that it is difficult to make this manner of ascribing to things a rational account (corresponding to the formal principle supposedly inherent in the entity in question) apply in all cases (**ἐν ἅπασιν**: i.e. in the case of *every kind* of entity: see συνάγοντας, above), that is, both in the case of animals and plants (**ἐν ζῴοις καὶ φυτοῖς**: i.e., τὰ ἔμψυχα) and in that of the very bubble (**ἐν αὐτῇ πομφόλυγι**). The πομφόλυξ is adduced here either as an instance of an inorganic entity, or, perhaps more likely, to represent the smallest entity consisting of matter plus form (the soul-principle enclosed in an envelope), operating as the semen or seed of organic entities (αὐτῇ indicating that we are at a basic level here: cp. the Homeric αὐτῇ ... γαίῃ, αὐτῇ ... θαλάσσῃ in 5 b 17); see, with regard to spontaneous generation

> Arist. *GA* 762 a 18-27 γίνονται δ' ἐν γῇ καὶ ἐν ὑγρῷ τὰ ζῷα καὶ τὰ φυτὰ διὰ τὸ ἐν γῇ μὲν ὕδωρ ὑπάρχειν, ἐν δ' ὕδατι πνεῦμα, ἐν δὲ τούτῳ παντὶ θερμότητα ψυχικήν, ὥστε τρόπον τινὰ πάντα ψυχῆς εἶναι πλήρη· διὸ συνίσταται ταχέως, ὁπόταν ἐμπεριληφθῇ. *ἐμπεριλαμβάνεται δὲ καὶ γίνεται θερμαινόμενον τῶν σωματικῶν ὑγρῶν οἷον ἀφρώδης πομφόλυξ.* αἱ μὲν οὖν διαφοραὶ τοῦ τιμιώτερον εἶναι τὸ γένος καὶ ἀτιμότερον τὸ συνιστάμενον ἐν τῇ περιλήψει τῆς ἀρχῆς τῆς ψυχικῆς εἰσιν. τούτου δὲ καὶ οἱ τόποι αἴτιοι καὶ τὸ σῶμα τὸ περιλαμβανόμενον.

The use of the term ἀφρώδης in the following passages suggests that the alleged phenomenon is by no means restricted to what is supposed to be spontaneous generation; as a matter of fact, Aristotle tells us that the bubble was traditionally associated with generation:

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[1] Cp. *ad* ἀφορίσαι 4 a 2.

Arist. *GA* 736 a 18-21 ἔοικε δὲ οὐδὲ τοὺς ἀρχαίους λανθάνειν *ἀφρώδης ἡ τοῦ σπέρματος οὖσα φύσις*· τὴν γοῦν κυρίαν θεὸν τῆς μίξεως ἀπὸ τῆς δυνάμεως ταύτης προσηγόρευσαν.

The association can be traced back as far as Diogenes of Apollonia, and possibly goes back to Pythagoras: see BALME (1962) 98-9 with note 3 (for further reference).

GA 736 b 35 – 737 a 1 τοῦτο δ' (sc. τὸ καλούμενον θερμόν) οὐ πῦρ οὐδὲ τοιαύτη δύναμίς ἐστιν, *ἀλλὰ τὸ ἐμπεριλαμβανόμενον ἐν τῷ σπέρματι καὶ ἐν τῷ ἀφρώδει πνεῦμα* καὶ ἡ ἐν τῷ πνεύματι φύσις, ἀνάλογον οὖσα τῷ τῶν ἄστρων στοιχείῳ.

There is, therefore, some sort of contrast, but certainly not in the sense of a thesis (7 a 10 ff.: criticism of the materialists) and antithesis (in which "Theophrastus points out the difficulty involved in holding the opposing view that the *archai* are determinate" ELLIS (1988) 221); the point rather seems to be that the *third* position, which holds that the principles are ἐξ ἀμφοῖν—although plausible in itself—does not seem to work in all cases as long as the determinateness of the principles is conceived as being due to an inherent final cause. The conclusion must be that πάλιν may be rendered either as "but again" or as "but on the other hand", as long as the latter is not supposed to introduce an antithesis in a dialectical argument.[1]

7 a 22 – b 2 πλὴν εἰ ... τὴν γῆν·

πλὴν εἰ introduces an exception, in this case a possible way to evade the problem posed by the assertion χαλεπὸν ... περιθεῖναι 7 a 19-20: a rational account for the diversity observed in nature—a phenomenon which cannot be explained by a theory that assumes an inherent principle to be leading to a particular form—involves no problem if this diversity is assumed to be due to an influence from without.[2]

πλὴν εἰ may be construed with different moods: the optative with a minimum of actuality, to denote an exception advanced as a mere possibility, as in πλὴν εἴ τις τοιαύτας λαμβάνοι τὰς μορφὰς οἵας Δημόκριτος ὑποτίθεται τῶν ἀτόμων, 11 b 21 ff.; or with the subjunctive to denote a distributive/iterative situation as in

HP III.7.1 (...) τὰ μὲν ἄλλα πάνθ' ὡς εἰπεῖν παραβλαστάνει, πλὴν ἐὰν αἱ ῥίζαι πρότερον τύχωσι πεπονηκυῖαι.

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[1] *Pace* ELLIS (1988) 222, 223 n. 6.

[2] For a different interpretation of the sentence introduced by πλὴν εἰ proposed by L-M, see pp. 309-10.

HP V.7.4 ἵσταται γὰρ καινὰ τὰ ναυπηγούμενα καὶ ὅταν συμπαγῇ καθελκυσθέντα συμμύει καὶ στέγει, πλὴν ἐὰν μὴ παντάπασιν ἐξικμασθῇ· τότε δὲ οὐ δέχεται κόλλησιν ἢ οὐχ ὁμοίως.
Ign. 41 καὶ ὅπου φύσει τοιοῦτος, ἀεὶ τοῦτο συμβαίνει, πλὴν ἐὰν δὴ τὸ ἔδαφος βοηθῇ διαρρέον καὶ τὴν ἰκμάδα παρέχον ἢ δρόσοι πίπτωσιν· οὕτως ἅμα τροφήν τε λαμβάνουσι καὶ πέψιν. (also *ibid.* 22).

With the indicative πλὴν εἰ frequently introduces a relevant exception; e.g.

HP I.1.2 τὸ μὲν οὖν μέρος ἅτε ἐκ τῆς ἰδίας φύσεως ὂν ἀεὶ δοκεῖ διαμένειν ἢ ἁπλῶς ἢ ὅταν γένηται, καθάπερ ἐν τοῖς ζῴοις τὰ ὕστερον γενησόμενα, πλὴν εἴ τι διὰ νόσον ἢ γῆρας ἀποβάλλεται.
I.6.5 αἱ αὐταὶ δὲ διαφοραὶ καὶ τῶν φρυγανικῶν καὶ τῶν ποιωδῶν καὶ τῶν ἄλλων· πλὴν εἰ ὅλως ἔνια μὴ ἔχει, καθάπερ ὕδνον μύκης πέζις κεραύνιον.
III.3.2 πάντα δὲ καὶ ἐν τοῖς ὄρεσιν, ὅταν ἐπιλαμβάνωνται τῶν οἰκείων τόπων, καὶ καλλίω φύεται καὶ εὐθενεῖ μᾶλλον· ὡς δὲ ἁπλῶς εἰπεῖν τὰ ἐν τοῖς ὁμαλέσι τῶν ὀρῶν καὶ μάλιστα, τῶν δὲ ἄλλων τὰ ἐν τοῖς κάτω καὶ κοίλοις· τὰ δ' ἐπὶ τῶν ἄκρων χείριστα, *πλὴν εἴ τι τῇ* φύσει φιλόψυχρον· ἔχει δὲ *καὶ ταῦτ'* αὖ τινα διαφορὰν ἐν τοῖς ἀνομοίοις τῶν τόπων, ὑπὲρ ὧν ὕστερον λεκτέον.
CP VI.17.3 ὡς δ' ἐν ταῖς τῆς ἡμέρας ὥραις (sc. fragrance varies), ὁμοίως ἐν ταῖς τοῦ ἐνιαυτοῦ κατὰ λόγον (πλὴν εἴ τινων ἀκμαὶ καὶ πεπάνσεις κατ' ἄλλην ὥραν, ἢ εἴ τινων αἱ κράσεις τοῦ ἀέρος σύμμετροι πρὸς τὰς ὀσμάς, ...).

Also introducing an exception known by report only, but apparently worthy of being taken seriously:

CP I.2.2 ἐπὶ δὲ πεύκης καὶ ἐλάτης καὶ εἴ τι παραπλήσιον τούτοις οὐδὲν συμβαίνει τοιοῦτον, οὐδ' ἐπὶ κυπαρίσσου, *πλὴν εἴ τί που καὶ παραβλαστάνει, καθάπερ φασὶν ἐν Κρήτῃ* περὶ τοὺς καλουμένους δρυΐτας· *ἐνταῦθα γὰρ οὐδὲν ἄλογον* ὥσπερ καὶ τὰς ἄλλας παραφυάδας, ὑπορρίζους οὔσας καὶ ἐνύγρους καὶ ταύτας βλαστάνειν· *ἐπεὶ εἴ γε μὴ ἦσαν ὑπόρριζοι, χαλεπὸν ἢ ἀδύνατον. τοῦτο μὲν οὖν ὡς πρὸς ὑπόθεσιν λεγόμενον.*
HP II.2.2 ἔνια δὲ ἀπὸ σπέρματος φύεται μόνον, οἷον ἐλάτη πεύκη πίτυς ὅλως πᾶν τὸ κωνοφόρον. ἔτι δὲ καὶ φοῖνιξ, πλὴν εἰ ἄρα ἐν Βαβυλῶνι καὶ ἀπὸ τῶν ῥάβδων, ὥς φασί τινες μολεύειν.
III.2.1 ἅπαντα γὰρ οὕτως, πλὴν εἴ τι σπάνιον, ὥσπερ ἐπὶ τῶν κρανείων καὶ τῶν οὔων· ταῦτα γὰρ δή φασι πεπαίτερα καὶ ἡδύστερα τὰ ἄγρια τῶν ἡμέρων εἶναι· καὶ εἰ δή τι ἄλλο μὴ προσδέχεται γεωργίαν ἢ δένδρον ἢ καί τι τῶν ἐλαττόνων, οἷον τὸ σίλφιον καὶ κάππαρις καὶ τῶν χερδοπῶν ὁ θέρμος, ἃ καὶ μάλιστ' ἄν τις ἄγρια τὴν φύσιν εἴποι.
(Also III.3.3.)

Scepsis with regard to the report in question is explicit in e.g.

Lap. 24 ἔστι δὲ σπανία καὶ τὸ μέγεθος οὐ μεγάλη (sc. ἡ σμάραγδος), *πλὴν εἰ πιστεύειν ταῖς ἀναγραφαῖς δεῖ* ὑπὲρ τῶν βασιλέων τῶν Αἰγυπτίων· ἐκείνοις γάρ φασι κομισθῆναί ποτ' ἐν δώροις παρὰ τοῦ Βαβυλωνίων βασιλέως μῆκος μὲν τετράπηχυν πλάτος δὲ τρίπηχυν.

The way in which Th. expresses himself thus gives us no reason to assume that he does subscribe to this view, but even less to conclude that he does not do so (that would have been unambiguously expressed by the optative). Nor can the fact that in what follows reference is made to an example advanced by others (τινες 7 b 2, see below) be adduced as an indication "that Theophrastus is not speaking for himself", as ELLIS (1988) 222 suggests: as the passages quoted above show, there would be no reason to assume that Th. is sceptical *even if* the τινες were referred to as an authority for the possibility as such; as it is, these individuals are mentioned because of their directing attention to a particular, allegedly supreme example; noticeably, the reality of the referent of ὧν does *not* depend on their authority.

Accordingly, the possible way out of the problem which according to Th. is inherent in the position ἐξ ἀμφοῖν, is introduced in a noncommittal manner. That, however, Th. is not unsympathetic to this point of view may be inferred from the sequel; see 10 b 18-9 οὐθενὸς γὰρ ταῦθ' ἕνεκα, ἀλλὰ συμπτώματα καὶ δι' ἑτέρας ἀνάγκας, 10 a 26-7 τὰ μὲν συμπτωματικῶς τὰ δ' ἀνάγκῃ τινί, and especially 10 b 26 – 11 a 1 ᾗ καὶ ἔοικεν ὁ λόγος ἔχειν τι πιστόν, ὡς ἄρα τῷ αὐτομάτῳ ταῦτα καὶ τῇ τοῦ ὅλου περιφορᾷ λαμβάνει τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς (with commentary). For οἷον γεννῶντος τοῦ ἡλίου cp. *Ign.* 44 καὶ γὰρ αὕτη (sc. ἡ ἀπὸ τοῦ ἡλίου θερμότης) γόνιμος καὶ ζῴων καὶ φυτῶν. See also below.

For **συμβαίνει ... γίνεσθαι** see *ad* 5 b 23-6, pp. 233-4 above. The possible alternative to deriving the form of all things from an inherent tendency towards the end in question, which leaves the adherents of this theory with the difficulty of explaining the diversity and the variety of form in meteorological and terrestrial phenomena (**τῶν περὶ τὸν ἀέρα καὶ τὴν** γῆν; see *Vent.* 56 καὶ ταῦτα μὲν οὖν καὶ ὅσα ἄλλα τοιαῦτα περὶ τὸν ἀέρα καὶ τὸν ὅλον οὐρανὸν συμβαίνει, and ἐν τοῖς περὶ τὴν γῆν πλείοσιν, 10 a 27-8), is to assume that they are due to the influence of the heavenly bodies (**ἑτέρων**).[1]

For the phrase τὰ περί τι[2] see MUELLER (1878) 21-2: "Am haüfigsten ... finden sich die elliptischen Wendungen τὰ περί τι oder τὸ περί τι, um zu bezeichnen, was mit irgend einer Sache in Beziehung steht";[3] e.g. *HP* II.4.4 τὰ μὲν οὖν περὶ τὰς γενέσεις καὶ μεταβολὰς ἐκ τούτων θεωρητέον.

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[1] USENER's conjecture ἀστέρων ((1861) 276; "ingeniosissime", THEILER (1958) 104 n. 67) is "plausible but unnecessary", R-F *ad loc.*

[2] See also 5 b 12, 11 a 24, 11 b 14.

[3] By saying immediately after this: ", um einen Ausdruck zu verallgemeinern" MUELLER seems to give a slightly different interpretation to the phrase: "so heisst es [*HP*] I 1,3 ἔοικε δὲ παραπλησίως καὶ τὰ περὶ τὴν βλάστησιν ἔχειν, worauf fortgefahren wird ἡ γάρ τοι βλάσ-

Like πολύχους (see *ad* πολυχουστέρα, 4 a 3-4), ποικίλος ("many-coloured") /**ποικιλία** is used to denote multiformity of various kinds and especially variety of form (with respect to εἶδος):

HP I.1.1 εἰσὶ δ' αἱ μὲν (διαφοραὶ) κατὰ τὴν γένεσιν καὶ τὰ πάθη καὶ τοὺς βίους εὐθεωρητότεραι καὶ ῥᾴους, αἱ δὲ κατὰ τὰ μέρη πλείους ἔχουσι ποικιλίας. Also I.1.10 quoted *ad* 4 a 3-4, p. 75 above.

Ps.-Arist. *Probl.* 905 a 30-4 διὰ τί ἡ φωνὴ ὕστατον τελειοῦται τοῖς ἀνθρώποις τῶν φθεγγομένων; ἢ διότι πλείστας ἔχει διαφορὰς καὶ εἴδη; τὰ γὰρ ἄλλα ζῷα ἢ οὐδὲν γράμμα ἢ ὀλίγα διαλέγονται. τὸ δὲ ποικιλώτατον καὶ πλείστας ἔχον διαφορὰς ἀνάγκη ἐν πλείστῳ χρόνῳ ἀποτελεῖσθαι.

The theory that the multiformity of terrestrial phenomena is caused by the variety of movements of the planets is ascribed to the Peripatetician Adrastus in

Theo Smyrn. p. 148.13 ff. Hill. πρὸς ... τὴν χρόνου διαρίθμησιν καὶ τὴν τῶν περιγείων καὶ ὑπογείων μεταβολὴν ἐγένετο *ἡ τῶν πλανωμένων φορὰ ποικίλη τις ἤδη συνεστηκυῖα, ὥστε ἀκολουθεῖν αὐτῇ τὰ ἐνταῦθα*. ταῖς γὰρ τούτων τροπαῖς προσιόντων καὶ ἀπιόντων συμμεταβάλλει καὶ τἀνταῦθα *παντοίως*. τῶν μὲν γὰρ ἀπλανῶν ἁπλῆ καὶ μία φορὰ κύκλῳ, τεταγμένη τε καὶ ὁμαλή. τῶν δὲ ἄλλων πλανωμένων κυκλικὴ μέν, οὐ μὴν ἁπλῆ δοκεῖ καὶ μία, οὐ δὲ ὁμαλὴ καὶ τεταγμένη. τῶν δ' ὑπὸ σελήνην καὶ περὶ ἡμᾶς καὶ μέχρις ἡμῶν πᾶσα μεταβολὴ καὶ κίνησις καί, καθάπερ φησίν, "ἔνθα κότος τε φόνος τε καὶ ἄλλων ἔθνεα κηρῶν".[1] καὶ γὰρ γένεσις καὶ φθορὰ περὶ πάντα τἀνταῦθα καὶ αὔξησις καὶ μείωσις ἀλλοίωσίς τε *παντοία* καὶ ἡ κατὰ τόπον *ποικίλη* φορά. τούτων δέ, φησίν (sc. Adrastus), αἴτια τὰ πλανώμενα τῶν ἄστρων ... *ἐγγίνεται δ' ἡ μεταβολὴ τῇ ποικίλῃ φορᾷ τῶν πλανωμένων*. εἰ γὰρ ὁμοίως τοῖς ἀπλανέσι καὶ ταῦτα ἐφέρετο κατὰ παραλλήλων, ἀεὶ ὁμοίας οὔσης τῆς τῶν ὅλων καὶ πάντων καταστάσεως, οὐκ ἂν τῶν ἐνταῦθα ἑτεροίωσις ἢ μεταβολή τις ἦν. (See PFEIFFER (1916) 51.)

It has already been pointed out earlier in the treatise that lack of uniformity of movement in the οὐράνια as such is problematic from a consistently teleological point of view: see Ch. II (esp. 5 a 15-21, 5 b 21-6); also Ch. IX, 10 a 27. The evident variety of form of the phenomena in the *lower* levels of the cosmos is equally problematic if all things are supposed to contain a formal principle conceived as an internal tendency towards the best. The solution brought forward in the present context consists in linking up this variety of form with the orderliness (which is merely relative; hence, presumably: the order *and change*—or, orderly change?—**τῇ ... τάξει καὶ μεταβολῇ**) of the

τησις γενέσεως χάριν ἐστὶ τῆς τελείας"—although in this example too the phrase would seem to refer to the various aspects of the phenomenon rather than to generalize the expression. The effect of generalization, however, *is* prevalent in the use of περί + genitive in 7 b 10.

[1] Empedocles B 121 DK.

heavenly bodies (ἑτέρων).[1] In this way a variety is explained which could not be explained if all natural entities of a certain type are supposed to follow an inner tendency towards a particular form. For Th.' conviction that the diversity of shape and the variety of phenomena are an indication that no final cause is involved, see οὐθενὸς γὰρ ταῦθ' ἕνεκα, ... · ἔδει γάρ, εἴπερ τούτων χάριν, ἀεὶ κατὰ ταὐτὰ καὶ ὡσαύτως, 10 b 18-20.[2]

The idea that the orbits of the sun, the moon, and the planets are the cause of meteorological phenomena as well as of the change in and generation of natural entities is in accordance with Aristotelian doctrine as such; see e.g.

> Arist. *GA* 777 b 27 – 778 a 4 αἱ γὰρ θερμότητες καὶ ψύξεις μέχρι συμμετρίας τινὸς ποιοῦσι τὰς γενέσεις, μετὰ δὲ ταῦτα τὰς φθοράς· τούτων δ' ἔχουσι τὸ πέρας καὶ τῆς ἀρχῆς καὶ τῆς τελευτῆς αἱ τούτων κινήσεις τῶν ἄστρων. ὥσπερ γὰρ θάλατταν καὶ πᾶσαν ὁρῶμεν τὴν τῶν ὑγρῶν φύσιν ἱσταμένην καὶ μεταβάλλουσαν κατὰ τὴν τῶν πνευμάτων κίνησιν καὶ στάσιν, *τὸν δ' ἀέρα καὶ τὰ πνεύματα κατὰ τὴν τοῦ ἡλίου καὶ τῆς σελήνης περίοδον, οὕτω καὶ τὰ ἐκ τούτων φυόμενα καὶ τὰ ἐν τούτοις ἀκολουθεῖν ἀναγκαῖον*· κατὰ λόγον γὰρ ἀκολουθεῖν καὶ τὰς τῶν ἀκυροτέρων περιόδους ταῖς τῶν κυριωτέρων· ... τῆς δὲ τῶν ἄστρων τούτων περιφορᾶς τάχ' ἂν ἕτεραί τινες εἶεν ἀρχαί.

That this idea was not new in Aristotle's (supposedly) later works may be inferred from

> Arist. *GC* 336 b 15 – 24 φαίνεται δὲ καὶ κατὰ τὴν αἴσθησιν ὁμολογούμενα τοῖς παρ' ἡμῶν λόγοις· ὁρῶμεν γὰρ ὅτι προσιόντος μὲν τοῦ ἡλίου γένεσίς ἐστιν, ἀπιόντος δὲ φθίσις, καὶ ἐν ἴσῳ χρόνῳ ἑκάτερον· ἴσος γὰρ ὁ χρόνος τῆς φθορᾶς καὶ τῆς γενέσεως τῆς κατὰ φύσιν. ἀλλὰ συμβαίνει πολλάκις ἐν ἐλάττονι φθείρεσθαι διὰ τὴν πρὸς ἄλληλα σύγκρασιν· ἀνωμάλου γὰρ οὔσης τῆς ὕλης καὶ οὐ πανταχοῦ τῆς αὐτῆς ἀνάγκη καὶ τὰς γενέσεις ἀνωμάλους εἶναι καὶ τὰς μὲν θάττους τὰς δὲ βραδυτέρας ὥστε συμβαίνει διὰ τὴν τούτων γένεσιν ἄλλοις γίνεσθαι φθοράν. (Also 338 b 3-5.)

For the influence of the sun especially see also the next note.

This idea appears very often, and in various contexts, in Th.' works: see, e.g., about the influence of the (orbit of the) sun on the weather (or, the seasons):

> *Vent.* 10 πλείστων δ' ὄντων ὥσπερ εἴρηται βορείων καὶ νοτίων ἑκατέρων οἷον τάξις, ἐν οἷς χρόνοις μάλιστα πνέουσι κατὰ λόγον ... καὶ γὰρ αἵ τε τοῦ ἡλίου φοραὶ συνεργοῦσιν ἀμφοτέροις καὶ ἡ ἀνταπόδοσις γίνεται καθάπερ παλιρροῦντος τοῦ ἀέρος. See also *ibid.* 11-2; 15; 41.

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[1] See p. 315; cp. the passage from Theo Smyrn., above.

[2] For the reverse axiom that regular occurrences cannot be ascribed to chance see Arist. *Cael.* 289 b 26 ff., *Phys.* 196 b 10 ff.

CP III.2.6 τοῦτο δ' ἐν δυοῖν ὥραιν γίνεται μάλιστα τοῖς γε δένδροις ἔαρι καὶ μετοπώρῳ καθ' ἃς καὶ φυτεύουσι μᾶλλον, καὶ κοινοτέρως ἐν τῷ ἦρι· τότε γὰρ ἥ τε γῆ διύγρος καὶ ὁ ἥλιος, θερμαίνων ἄγει καὶ ὁ ἀὴρ μαλακός ἐστι καὶ ἐρσώδης ὥστε ἐξ ἁπάντων εἶναι τὴν ἐκτροφὴν καὶ τὴν εὐβλαστίαν. (Also III.3.1 ὁ γὰρ ἥλιος οὐ μόνον δοκεῖ τὰ ὑπὲρ γῆς ἀλλὰ καὶ τὰ ὑπὸ γῆς εὐτραφέστερα καὶ καλλίω ποιεῖν, and 4.2 τρέφει γὰρ καὶ αὔξει πάνθ' ὁ ἥλιος καὶ ὁ ἀήρ.)

A similar influence is ascribed to the moon:

Vent. 17 ποεῖ δὲ καὶ ἡ σελήνη ταὐτὰ πλὴν οὐχ ὁμοίως· οἷον γὰρ ἀσθενὴς ἥλιός ἐστι.[1]

and to the other stars:

CP II.19.4 ἐπεὶ καὶ ἐν τοῖς μὴ τοιούτοις (sc. θερμοῖς καὶ ἐμπύροις) αἱ διαδόσεις ταχεῖαι πάντων ἀπὸ τοῦ ἡλίου καὶ τῶν ἄστρων· φαίνεται γοῦν συμπάσχειν οὐ μόνον τὰ ἐπὶ γῆς, ἀλλὰ καὶ τὰ ὑπὸ γῆς ὕδατα τροπαῖς τε καὶ ἐπιτολαῖς· ἐπ' ἐνίων δὲ ἄστρων καὶ αὐτὴ ἡ γῆ καὶ ἡ θάλαττα μετάβαλλει.

HP II.4.4 καὶ γὰρ τὰς κατὰ τὰς ὥρας ἔνια (sc. of the ζῷα) δοκεῖ μεταβάλλειν ... καὶ κατὰ τὰς τῶν τόπων ἀλλοιώσεις, ... ἀλλ' ἐκεῖνο συμβαίνει περὶ τὰ δένδρα καὶ ὅλως πᾶσαν τὴν ὕλην, ..., ὥστε αὐτομάτην μεταβλαστάνειν μεταβολῆς τινος γινομένης ἐκ τῶν οὐρανίων τοιαύτης.

Vent. 17 συμβαίνει δ' οὖν ὁτὲ μὲν ἀνατέλλοντος τοῦ ἡλίου τὰ πνεύματα ἐπαίρεσθαι ὁτὲ δὲ λήγειν· καὶ ἐπὶ τῆς δύσεως ὁμοίως· ὁτὲ μὲν γὰρ κατέπαυσεν ὁτὲ δὲ ὥσπερ ἀφῆκεν. εἰ δέ ποτε καὶ κατὰ σύμπτωμα γίνοιτο ταῦτα, καθάπερ καὶ τὰ ἐπὶ τῶν ἄστρων ἀνατολαῖς καὶ δύσεσιν ἐπισκεπτέον τοῦτ' ἂν εἴη.

7 b 2-5 ὧν δὴ μέγιστόν ... τοῦ ἡλίου.

ἐτησίους Usener (1890), cp. Isḥāq; ἐστησιους P; αἰτίους JCL; ἐτείους A

In view of the reading of P it seems best to adopt Usener's reading (as indeed R-F, L-M do); for αἰτίους, cp. *CP* I.10.5 ... δεῖ τινα συμμετρίαν ἕκαστον ἔχειν πρὸς τὴν ὥραν· γίνεται γὰρ αἰτιωτάτη.[2]

The main or most authoritative (**μέγιστόν ... παράδειγμα**)[3] example of the influence of the orderly change of the heavenly bodies on the various forms of meteorological and (as it appears now, *via* these, on those of the)

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[1] Cp. Arist. *GA* 777 b 24-7 ἔστι δὲ ἡ σελήνη ἀρχὴ διὰ τὴν πρὸς τὸν ἥλιον κοινωνίαν καὶ τὴν μετάληψιν τὴν τοῦ φωτός· γίνεται γὰρ ὥσπερ ἄλλος ἥλιος ἐλάττων· διὸ συμβάλλεται εἰς πάσας τὰς γενέσεις καὶ τελειώσεις.

[2] αἰτιωτάτη Einarson/Link (ut tenerrima effici possint Gaza); ἀπαλωτάτη MSS.; del. Wimmer.

[3] The winds by themselves could have been advanced as a παράδειγμα not necessarily connected with the seasons: *Vent.* 1 καὶ ὅλως ἃ συμβαίνει περὶ τὸν οὐρανὸν ἢ περὶ τὸν ἀέρα καὶ τὴν γῆν καὶ τὴν θάλατταν διὰ τὴν πνοήν.

terrestrial phenomena, is according to some persons to be found in the facts relating to the annual seasons (**τὰ περὶ τὰς ὥρας τὰς ἐτησίους**: see *ad* τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν, 7 b 1-2).

This example could with some reason be considered to carry most authority in so far as it represents the most regular of meteorological conditions (τὰ περὶ τὸν ἀέρα); it is, in any case, presented as being familiar to the audience (**δή**). It seems not unlikely, then, that the **τινες** are to be looked for in Peripatetic circles (cp. ὥς γε δή τινές φασιν, 4 a 4); this would agree with the supposition that from χαλεπὸν δέ onwards the Peripatetic position is being discussed in particular (see commentary *ad loc.*). For the use of the adjective, compare

> Plut. *Mor.* 993 E ὁ δὲ λιμὸς οὐκ ἐδίδου χρόνον οὐδ' ὥρας ἐτησίους σπόρος πυρῶν[1] τότ' ἀπένεμε ("our hunger gave us no respite nor was there any seed at that time awaiting the annual season of sowing", tr. HEMBOLD).

Cp. also

> *CP* V.7.3 τὸ δ' ὅλον οὐκ ἄγαν ἴσως τὸ συμβαῖνον θαυμαστόν, τῷ τε εἰς τὸ σύνεγγυς καὶ εἰς τὸ ὅμοιόν πως μεταβάλλειν, καὶ ἔτι τῷ ὁρᾶν καὶ ἐπί γε τῶν ζῴων γινομένας τοιαύτας τινὰς μεταβολάς, τὰς μὲν κατὰ τὴν γέννησιν (οἷον ἐπ' ἄλλων καὶ ἐπὶ τῶν καλουμένων ψυχῶν· ἐκ κάμπης γὰρ χρυσάλλις, εἶτα ἐκ ταύτης ἡ ψυχή. τοῦτο γὰρ ἐπὶ τῶν φυτῶν οὐδενὸς συμβαίνει), τῶν δὲ καὶ τετελειωμένων ἤδη κατὰ τὰ πάθη καὶ τὰς διαθέσεις τοῦ σώματος, αἳ γίνονται διὰ τὰς ἐπειτείους ὥρας (ὥσπερ τοῖς ὄρνεσιν, ἐπὶ τούτων γὰρ μάλιστα καὶ λέγεται καὶ ἔνδηλος τῶν χρωμάτων μεταβολὴ καὶ τῶν ὅλων σωμάτων, ὥστε δοκεῖν ἑτέρους εἶναι).

Since **ἐν αἷς** refers to the seasons, not to the conditions connected with them, the preposition may be interpreted in a temporal sense; in view of the context, however, it is more likely that it expresses a relation of dependency.

As may be inferred from the mere fact that generation both of plants and of fruit is named in the same breath, it presumably is not the recurrence of one particular season that is meant. In actual fact, both the time of annual sprouting (according to Th. as it were a 'second generation') and the time of bearing fruit vary according to the kind of plant involved:

> *CP* I.10.1 ἡ δ' ἐπέτειος βλάστησις, αὕτη γὰρ οἷον δευτέρα γένεσίς ἐστιν, οὐχ ἅμα γίνεται πᾶσιν, ἀλλὰ παραλλάττει ταῖς ὥραις, ὥστε σχεδὸν ἐν ταῖς ἐναντίαις ἐνίων εἶναι καὶ τὰ μὲν θέρους, τὰ δὲ χειμῶνος βλαστάνειν. ὁμοίως δὲ καὶ ἡ καρπογονία· καὶ γὰρ αὕτη διέστηκε τοῖς χρόνοις. ὡς μὲν ἁπλῶς εἰπεῖν, τὰ πρὸς ἑκάστην ὥραν σύμμετρον ἔχοντα τὴν κρᾶσιν, ταῦτα καὶ τὰς βλαστήσεις ἐν ἑκάστῃ καὶ τὰς τελειώσεις τῶν καρπῶν ἀποδίδωσιν.

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[1] πυρῶν Diels; ὧν MSS.

For γένεσις from seed (in the case of plants growing in gardens) in different seasons varying according to the type of plant, see

HP VII.1.1-2 εἰσὶ δὴ τρεῖς ἄροτοι (seed-times) πάντων τῶν κηπευομένων, ἐν οἷς ἕκαστα σπείρουσι διαιροῦντες ταῖς ὥραις. εἷς μὲν οὖν ὁ χειμερινός, ἄλλος δὲ ὁ θερινός, τρίτος δὲ ὁ μεταξὺ τούτων μεθ' ἡλίου τροπὰς χειμερινάς. (2) καλοῦσι δ' οὕτως οὐ πρὸς τὴν σπορὰν βλέποντες ἀλλὰ πρὸς τὴν γένεσιν καὶ τὴν χρείαν ἑκάστου· ἐπεὶ ἥ γε σπορὰ σχεδὸν ἐν τοῖς ἐναντίοις γίνεται.

The absence of the article with γενέσεις might indicate that Th. even reckons with second bearings/sproutings in the case of both animals and plants: see e.g.

CP I.14.1 τῷδ' ἐπὶ τῶν διφορούντων δένδρων ὅμοιόν τινα τρόπον ἐστὶν τὸ ἐπὶ τῶν προβάτων γινομένων· ἐκεῖνα γὰρ εὐτοκήσαντα καὶ εὐγονοῦντα πάλιν ὁρμᾷ πρὸς κύησιν ἐκποιούσης ἔτι τῆς ὥρας. καὶ τὰ δένδρα παραιρεθέντων τῶν πρώτων καρπῶν γονεύει πάλιν ἑτέρους, δεῖται δ' ἴσως χώρας τε εὐτρόφου τὰς τοιαῦτα καὶ τὰς θεραπείας πλείονος, ἢ ἀμφοῖν, *καὶ μάλισθ' (ὡς εἰπεῖν) τῆς τοῦ ἀέρος κράσεως ὅπως λάβῃ χρόνον ἱκανὸν εἰς τὴν κύησιν.*[1]

Cp. also the phenomenon of a second sprouting of trees in July-August which takes place under the influence of the weather (as opposed to the more natural sprouting in spring)

CP III.3.2-3 ὅτι ⟨δὲ⟩ πλείω ταῦτα (sc. the slips that suffer when winter follows the planting) ⟨καὶ⟩ τῆς φύσεως αὐτῆς ἐστι σημεῖα τῶν πρὸς τὴν φυτείαν ὡρῶν τό τε παρορμᾶν αὐτὰ τὰ δένδρα τοῦ ἦρος καὶ τὸ κοινοτέραν εἶναι πᾶσι ταύτην, δῆλον ὡς φυσικώτερον ἄν τις θείη ταύτην. ἐπεὶ καὶ ὅπου περὶ Κύνα καὶ τοὺς ἐτησίας εὐθενεῖ καὶ ἐπιβλαστάνει (have a second sprouting) τὰ δένδρα, τηνικαῦτα καὶ τὰς φυτείας ποιοῦνται, πολλῷ δέον ἀκολουθεῖν τῇ τοῦ ἀέρος κράσει καὶ τῇ τῶν φυτῶν ὁρμῇ· τάχα δὲ καὶ ἡ ὁρμὴ γίνεται διὰ τὸ περιέχον.
See also *CP* I.13.1 ff.

The idea of the seasons (with their typical quality of air), themselves dependent on the movements of the heavenly bodies, being responsible for the generation of living organisms plays a central role in *CP* especially:

CP I.21.2 ἔοικε γὰρ (sc. τὸ περικάρπιον) ὥσπερ ὑπὸ τοῦ ἡλίου καὶ τοῦ ἀέρος καὶ τῆς ὥρας συνέψεσθαι, τὸ δὲ σπέρμα τῆς φύσεως ἰδιώτερον εἶναι.

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[1] For the influence of climatological conditions on the second bearing of sheep and goats too, see Arist. *HA* 573 b 20-2 κύει δὲ πέντε μῆνας καὶ πρόβατον καὶ αἴξ· διὸ ἐν ἐνίοις τόποις, ὅσοι ἀλεεινοί εἰσι καὶ ἐν οἷς εὐημεροῦσι καὶ τροφὴν ἄφθονον ἔχουσι, δὶς τίκτουσιν.

CP II.3.7 ὁ γὰρ ἀὴρ[1] διὰ ψυχρότητα τὰ μὲν ὅλως οὐ δέχεται, τὰ δ' ὅσον εἰς βλάστησιν, ἔνια δὲ εἰς καρπόν· ὁ δὲ οἰκεῖος ἤδη διατελοῖ τὰ[2] τῆς φύσεως.
III.3.1 (...) ὁ ἀὴρ μαλακὸς καὶ εὐβλαστὴς καὶ ὅλως ἡ ὥρα γονιμωτάτη· ...[3]
(See also below.)

The quality of the air lies in its κρᾶσις: see *CP* I.10.1 and III.3.3 above; also

CP I.20.4 καὶ γὰρ ταῦτα (a particular kind of trees) ξυνακολουθεῖν ταῖς ὥραις καὶ τῇ κράσει τοῦ ἀέρος.
II.1.6 καὶ γὰρ ὅλως πᾶσα μεταβολὴ καὶ γένεσις δεῖται τῆς τοιαύτης εὐκρασίας (i.e. μαλακοῦ τινος ἀέρος ... καὶ εὐμενοῦς εἰς τὴν ἐκτροφήν).

The air develops the ἀρχή or δύναμις belonging to the nature of the organism in question:

CP I.12.9 ἔχουσιν γὰρ δή τινας οἱ κλάδοι καὶ οἱ ἀκρεμόνες (twigs and branches) ἐν ἑαυτοῖς ἀρχὰς ζωτικάς, αἳ διαθερμαινόμεναι τῇ ὥρᾳ προΐενται τοὺς βλαστοὺς καὶ μὴ ῥιζουμένων τῶν κάτω· ... .
Od. 63 ὅλως δὲ πάντα κινεῖται τὰ φλοιόριζα (plants of which the root is in layers) καὶ σαρκόριζα μὴ ἀπεξηραμμένα κατὰ τὰς βλαστητικὰς ὥρας· ἡ γὰρ ἐνυπάρχουσα δύναμις ἐν αὐτοῖς κινεῖται.

The relation between the natural condition of the plant and that of the season (or, of the air in general) is expressed in terms of συμπάθεια, συμμετρία (and the like):[4]

CP I.7.4 τοῦ δ' ἀέρος μεταβάλλοντος καὶ τῆς οἰκείας ὥρας, συμπαθῆ τε γίνεται καὶ βλαστάνει
III.3.3 τάχα δὲ καὶ ἡ ὁρμὴ γίνεται διὰ τὸ περιέχον. ὅπου δ' αὖ θερινὸς ὄμβρος πολύς, ὥσπερ ἐν Αἰθιοπίᾳ καὶ ἐν Ἰνδοῖς, ..., ἐνταῦθα δὴ πρὸ τούτων ἢ μετὰ τούτους εἰκὸς τὴν φυτείαν ἁρμόττειν· τηνικαῦτα γὰρ ἡ τοῦ ἀέρος κρᾶσις σύμμετρος.

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[1] "our climate" EINARSON/LINK.

[2] διατελοῖ τὰ Wimmer; διατελειότατη U^{ar} (-ότητα U^{r-c}); διὰ τελειότητα u (-ότητα N) HP.

[3] γόνιμος of the times of the year in Hippocr. *Epid.* 2.6.8 ἀπόληψις δὲ τοῦ νοσήματος οὐκ ἂν γένοιτο, εἰ μὴ ἐν γονίμῳ ἡμέρῃ, οὐδὲ ἂν ἀρχὴ γένοιτο, ἢν μὴ ἀγόνῳ ἡμέρῃ καὶ μηνί, ἔτει δὲ γονίμῳ. (also 2.6.10, 2.5.12); for the connection between fertility and odd numbers (ἐν γονίμῳ "un jour impair", tr. LITTRÉ), see also Plut. *Mor.* 288 D. Cp. the proverb ἔτος φέρει οὐχὶ ἄρουρα, quoted with approval by Th. *HP* VIII.7.6 and *CP* III.23.4.

[4] "The conception of sympathy goes back certainly to the period before the fourth century B.C. But it is Theophrastus who gives sympathy its place in natural science. Since he acknowledges its effect apparently on account of philosophical argumentations it is not the Stoics who have the first system of sympathy", EDELSTEIN (1967) 233-4 n.

In view of the question posed in the beginning of this treatise (see *ad* συναφή, 4 a 9-10, and the passages from *SVF* cited there), it is to be noted that in Stoic context συμπάθεια between differrent ingredients of being implies that the world is a uniform body, *rather than* a composite whole consisting of interconnected parts: *SVF* II.1013 p. 302, 23-32 (= S.E. *Adv.*

CP I.10.1 ὡς μὲν οὖν ἁπλῶς εἰπεῖν, τὰ πρὸς ἑκάστην ὥραν σύμμετρον ἔχοντα τὴν κρᾶσιν, ταῦτα καὶ τὰς βλαστήσεις ἐν ἑκάστῃ καὶ τὰς τελειώσεις τῶν καρπῶν ἀποδίδωσιν.

I.10.5 ... ἀλλ' ἐκεῖνο φανερόν, ὡς οὔτε μεγέθει καὶ μικρότητι τὸ πρωϊβλαστὲς καὶ ὀψιβλαστὲς ἀφοριστέον, οὔτ' ἴσως θερμότητι ⟨καὶ ψυχρότητι⟩ καὶ ὑγρότητι καὶ ξηρότητι μόνον, ἀλλὰ δεῖ τινα συμμετρίαν ἕκαστον ἔχειν πρὸς τὴν ὥραν· γίνεται γὰρ αἰτιωτάτη.[1]

To conclude, the position formulated here as to the generation of the sublunary entities seems to involve a variety of Peripatetic conceptions, and as such is not unlikely to represent Th.' own views on the problem (see *ad* πλὴν εἰ, 7 a 22-3).[2] At least two factors are involved in providing the λόγος of these entities, (1) the ἀρχή, φύσις or δύναμις of the natural entities themselves, presumably to be localized in one of the elementary principles, τὸ θερμόν in particular, and (2) the conditions of the air connected with the seasons, which in their turn are dependent on the motions of the heavenly bodies, and of the sun in particular.[3] The latter apparently is held responsible for the development of the form of the individual entities and of other specific characteristics, that is, for τὸ μορφοῦσθαι κατὰ τοὺς λόγους, 8 a 13-4.

As appears from **οἷον** (see *ad* 4 a 10) the role ascribed to the sun (**γεννῶντος τοῦ ἡλίου**) involves a metaphor of some kind, probably a comparison with the role of the male parent in animal generation imparting form from out-

Math. IX.78) ἐπεὶ οὖν καὶ ὁ κόσμος σῶμά ἐστιν, ἤτοι ἡνωμένον ἐστὶ σῶμα ἢ ἐκ συναπτομένων ἢ ἐκ διεστώτων. οὔτε δὲ ἐκ συναπτομένων οὔτε ἐκ διεστώτων, ὡς δείκνυμεν ἐκ τῶν περὶ αὐτὸν συμπαθειῶν· κατὰ γὰρ τὰς τῆς σελήνης αὐξήσεις καὶ φθίσεις πολλὰ τῶν τε ἐπιγείων ζῴων καὶ θαλασσίων φθινεῖ τε καὶ αὔξεται, ἀμπώτεις τε καὶ πλημμυρίδες περί τινα μέρη τῆς θαλάσσης γίνονται. ὡσαύτως δὲ καὶ κατά τινας τῶν ἀστέρων ἐπιτολὰς καὶ δύσεις μεταβολαὶ τοῦ περιέχοντος καὶ παμποίκιλοι περὶ τὸν ἀέρα τροπαὶ συμβαίνουσιν, ὁτὲ μὲν ἐπὶ τὸ κρεῖττον, ὁτὲ δὲ λοιμικῶς. ἐξ ὧν συμφανές, ὅτι ἡνωμένον τι σῶμα καθέστηκεν ὁ κόσμος. ἐπὶ μὲν γὰρ τῶν ἐκσυναπτομένων ἢ διεστώτων οὐ συμπάσχει τὰ μέρη ἀλλήλοις.

See Pfeiffer (1916) 53-4: "Die von Sextus Empiricus wiedergegebene stoische Anschauung lässt sich, von bemerkenswerten Ausnahmen abgesehen, fast für jeden Stoiker belegen. Zwar versetzte Kleanthes das ἡγεμονικόν in die Sonne. Doch lässt uns die Notiz, der wir diese Nachricht [D.L. VII.138] verdanken, erkennen, dass er auch den andern Gestirnen, Fixsternen und Planeten, Anzeil an der διοίκησις der Welt zuerkannte: ἡγεμονικὸν δὲ τοῦ κόσμου Κλεάνθει μὲν ἤρεσε τὸν ἥλιον εἶναι διὰ τὸ μέγιστον τῶν ἄστρων ὑπάρχειν καὶ πλεῖστα συμβάλλεσθαι πρὸς τὴν τῶν ὅλων διοίκησιν, ἡμέραν καὶ ἐνιαυτὸν ποιοῦντα καὶ τὰς ἄλλας ὥρας *SVF* I. 499, p. 112, 1-3 (= Eus. *Praep. Evang.* XV. 15.7). Ähnlich dachte auch Chrysippos ...: ἐπὶ πᾶσι (d.h. den andern Planeten) δὲ τὴν σελήνην πλησιάζουσαν τῷ ἀέρι. διὸ καὶ ἀερωδεστέραν φαίνεσθαι καὶ μάλιστα διατείνειν τὴν ἀπ' αὐτῆς δύναμιν εἰς τὰ περίγεια." *SVF* II, 527, p. 169, 6-8 (= Stob. *Ecl.* I, p. 185, 18-20 W.).

[1] αἰτιωτάτη Einarson/Link; ἁπαλωτάτη MSS.

[2] *Pace* Ellis (1988) 222.

[3] For the idea that the heat of the sun is most appropriate (μάλιστα ... οἰκεῖον) to plants, whereas the internal heat is more οἰκεῖον to animals, see e.g. *CP* VI.7.1.

side.[1] Unlike the male parent in biological reproduction,[2] the sun produces offspring with a variety of forms—this of course being the very reason why this explanation is attractive in the present context (see μορφάς τε παντοίας καὶ ποικιλίας, 7 a 23 – b 1).

The verb may be used of the maternal role as well, see Arist. *GA* 716 a 17 ff. (τὸ ... ἄρρεν καὶ τὸ θῆλυ διαφέρει κατὰ μὲν τὸν λόγον) τῷ ἄρρεν μὲν εἶναι τὸ δυνάμενον γεννᾶν εἰς ἕτερον, ..., τὸ δὲ θῆλυ τὸ εἰς αὐτό, καὶ ἐξ οὗ γίνεται ἐνυπάρχον ἐν τῷ γεννῶντι τὸ γεννώμενον. See also 734 b 34-6, p. 365.

More 'neutrally', of vegetable generation: *HP* I.1.3 τὰ γεννώμενα "those things to which the plant gives birth" (καρποί, for instance), tr. HORT; II.1.3 ὅλως γὰρ ὀλίγα τὰ ἀπὸ τῶν ἄνω μᾶλλον βλαστάνοντα καὶ γεννώμενα, καθάπερ ἄμπελος ἀπὸ τῶν κλημάτων—whether involving cultivation ("In fact there are quite few plants which grow and are brought into being more easily from the upper parts", tr. HORT) or not ("Au total, il y a peu d'espèces qui prennent vie et se propagent de préférence par leurs parties supérieures", tr. AMIGUES).

It thus appears that in view of the diversity of form in organic nature Th. tends to prefer an explanation in terms of efficient causation by the heavenly bodies, *via* the climate and other meteorological circumstances (see also 10 b 26 – 11 a 1), to the idea of an inherent λόγος directed towards a particular form in terms of final causation.[3]

In the present passage the scope of this type of explanation apparently is not felt to be restricted to exceptional phenomena—which are discussed in Ch. IX, 10 b 7 ff. below.

This passage, then, seems to suggest that if there is disagreement between Th. and his predecessor, what it amounts to is Th. having reservations about the concept of final causation as the paramount & comprehensive explanatory device.[4]

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[1] One might compare 584A.372-5 FHS&G (= Porph. *De abst.* II. 32.1), of the earth like a mother providing us with food: κοινὴ γάρ ἐστιν αὕτη (sc. ἡ γῆ) καὶ θεῶν καὶ ἀνθρώπων ἑστία, καὶ δεῖ πάντας ἐπὶ ταύτης ὡς τροφοῦ καὶ μητρὸς ἡμῶν κλινομένους ὑμνεῖν καὶ φιλοστοργεῖν ὡς τεκοῦσαν. Cp. Plato *Menex.* 237 E 5 – 238 A 3, where γεννᾶν is used also of the maternal role (see also below): ὃ δὴ καὶ ἡ ἡμετέρα γῆ τε καὶ μήτηρ ἱκανὸν τεκμήριον παρέχεται ὡς ἀνθρώπους γεννησαμένη· μόνη γὰρ ἐν τῷ τότε καὶ πρώτη τροφὴν ἀνθρωπείαν ἤνεγκεν τὸν τῶν πυρῶν καὶ κριθῶν καρπόν, ᾧ κάλλιστα καὶ ἄριστα τρέφεται τὸ ἀνθρώπειον γένος, ὡς τῷ ὄντι τοῦτο τὸ ζῷον αὐτὴ γεννησαμένη.—In the present context, of course, the anthropocentric orientation is absent, and the fostering role rather is that of the sun too: see *CP* III.4.2 (τρέφει γὰρ καὶ αὔξει πάνθ' ὁ ἥλιος καὶ ὁ ἀήρ), above.

[2] Which may be characterized as "formal replication", which "generates *teleological* explanations, explanations of processes by means of their outcomes, because the form at the end of such a process *is* the form responsible for the process's having just the structure and direction necessary to proceed to it." LENNOX (1982) 223.

[3] For which cp. LENNOX (1982) cited above.

[4] For a type of explanation presumably (at least) one step further removed from a teleolo-

IV.3 (7 b 5-8): *These questions need further discussion in the broader context of the question why, in the cosmos as a whole, the amount of order is necessarily limited.*

7 b 5-8 καὶ ταῦτα μὲν ... ἡ μετάβασις.

ῇ J^corr LB[2]; εἰ P; εἰ CAB Isḥāq; ἡ RB[1]HD; ῇ L-M.

The observation that on the one hand *absence of form* in the principles is unlikely, but on the other hand the Aristotelian solution (which posits *both a material and a formal factor*—i.e., an internal tendency towards a particular form— to account for the being of natural entities) does not explain the variety to be observed in nature, leads to the more general question how far the order in the cosmos extends anyway.

καὶ ταῦτα presumably summarizes the preceding paragraph as a whole, and in particular the considerations regarding the solution that the principles of natural objects involve both matter and form (7 a 19 – b 5). It should be noted that the theory that all principles are endowed with form (οἱ μὲν ... ἐμμόρφους πάσας, 7 a 6-7), the only theory not discussed any further in the preceding, is implicitly confuted by the problems involved in the solution which adopts shaped as well as material principles.

For the phrase, cp. ἀλλὰ δὴ τούτων μὲν πέρι σκεπτέον 11 b 24; **ζητεῖ τὴν σκέψιν** is more specific, in so far as the question at issue is presented as asking for *its own, particular* inquiry, as specified in **ἀφορισμὸν ἀπαιτοῦντα.** For ἀφορισμός, see *ad* ἀφορίσαι 4 a 2. ἀπαιτεῖν (involving a call for ἀποδιδόναι: see *Char.* XXX.7 below) suggests that the problem at issue has a claim to this particular delimitation (cp. *τὴν σκέψιν*); compare

Char. XVIII.5 καὶ τοὺς ὀφείλοντας αὐτῷ ἀργύριον μετὰ μαρτύρων ἀπαιτεῖν τοὺς τόκους, ὅπως μὴ δύναιντο ἔξαρνοι γενέσθαι.
(Also X.2, XII.11-2; XXX.7 τὸ αὐτοῦ ἀπαιτήσας ἀποδόσθαι, *et passim*.)
149.7-10 FHS&G (= Simpl. *In Phys.*, *Coroll. de loco*) διὸ καὶ ἕκαστον ἐν τῇ αὐτοῦ χώρᾳ λέγεται τῷ ἔχειν τὴν οἰκείαν τάξιν, ἐπεὶ καὶ τῶν τοῦ σώματος μερῶν ἕκαστον ἐπιποθήσειεν ἂν καὶ ἀπαιτήσειε τὴν ἑαυτοῦ χώραν καὶ θέσιν.

The two questions said to deserve an answer somewhere in this treatise (**ἐνταῦθά που**) will be discussed in Ch. IX.

Curiously enough, L-M connect ἐνταῦθά που with the preceding ταῦτα: "ces phenomènes dans ce lieu-ci", assuming that it puts "les objets de l'enquête dans

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gical one, adopted by Th.' successor Strato of Lampsacus, see GATZEMEIER (1970) 107 ff., and VAN RAALTE (1988) 203 f.

la partie de l'univers que nous habitons, et qui vient d' être circonscrite par περὶ τὸν ἀέρα καὶ τὴν γῆν, 7b1-2 ("ici-bas", avec peut-être une connotation platonicienne)." (*ad loc.*). Apart from the fact that this interpretation would seem to require the presence of the article (*ταῦτα ... τὰ ἐνταῦθα), που seems to be rather uncalled for too.

For ἐνταῦθα denoting a case under discussion, or a place in a study or discussion, see e.g. Plato *Resp.* 445 C 5 ἐπειδὴ ἐνταῦθα ἀναβεβήκαμεν τοῦ λόγου ..., 568 D 4 ἀλλὰ δὴ ... ἐνταῦθα μὲν ἐξέβημεν ("we are wandering from our subject"); also

CP VI.5.4 τὸ δὲ μὴ αἰσθάνεσθαι καθάπερ λέγουσιν, οὐ σαφὲς ἡμῖν. εἰ μὴ ἄρα καὶ τοὺς πόρους ἐνταῦθα ἄν τις αἰτιάσαιτο,[1] καθάπερ ἔνιοι τῶν φυσικῶν, τῷ εἰσαρμόττειν ἢ μή· ...

VI.18.6-7 (from 18.4 onwards the discussion concerns the exceptional case of the myrtle in Egypt) ἔοικεν ⟨δ'⟩ οὖν ὁμοίῳ καὶ τὸ ἐν Κιλικίᾳ περὶ τὰς ῥόας συμβαῖνον· ὡς γὰρ *ἐκεῖ* περὶ τὸν χυλόν, *ἐνταῦθα* περὶ τὴν ὀσμὴν ἡ δύναμις καὶ ἡ ἰδιότης. (7) *ἐκεῖ* μὲν οὖν αἰτιάσαιτ' ἄν τις ... . *ἐνταῦθα* δὲ πειρᾶσθαί γέ τινα δεῖ ζητεῖν ἰδίαν αἰτίαν ἥτις οἰκεία πρὸς τὴν εὐοσμίαν.

VI.15.3 ἀνάγκη γάρ, ὅταν ἐν τῷ τέλει γίνηται, τὴν μεταβολὴν εἶναι πρὸς τὸ χεῖρον, ὃ δὴ καὶ ἐνταῦθα[2] φαίνεται συμβαῖνον, μαλακωτέρας τῆς ὀσμῆς γινομένης, οἷον γὰρ ἄνεσίς τις γίνεται τῆς ἀκράτου.

Cp. also ἔνθα, opposed to ἐν ταῖς λοιπαῖς, 6 b 21.

For the following που, cp. *CP* V.12.9 ὑπὲρ μὲν οὖν τούτων ἐνταῦθά που τὸ αἴτιον; also IV.16.2 καὶ τούτων μὲν σχεδὸν ἐνταῦθά που τὸ αἴτιον.—these instances are, of course, not strictly parallel to the present passage, but pertinent enough in view of the parallelism of theory and subject matter observed elsewhere in our treatise; note especially *ὑπὲρ* ... τούτων in V.12.9, above.

For (ἀφορισμὸν ...) **μέχρι πόσου τὸ τεταγμένον**, see especially IX.3, 11 b 12 ff.; the answer to this question would be a way of evading the difficulty raised in χαλεπὸν ... ⟨τὸ⟩ τοὺς λόγους *ἑκάστοις* περιθεῖναι 7 a 19-20 (also ἐν ἅπασιν 21). For μέχρι πόσου asking for the limits set to order, cp. 11 b 9-10 *ἐφ' ὅσον* ἐνδέχεται (where Th. is formulating the situation from the point of view of those who "ascribe the cause to God").

The question **διὰ τί τὸ πλέον ἀδύνατον** κ.τ.λ., while it implies the ἀφορισμός to be an incontestable fact[3] rather than a requirement merely im-

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[1] "Unless here too one should ... make the sense-passages responsible", tr. EINARSON/LINK.

[2] I.e. "When a fragrant plant puts forth a scentless or less fragant flower", EINARSON/LINK *ad loc.*

[3] For the idea that extending the portion of order in the cosmos *maximally*, involves the destruction of the whole, see 11 b 7 ff.

posed by the question at issue, asks for the grounds for this delimitation. This of course amounts to a *conviction*,[1] that the cosmos consists of a certain harmony of ordered and disorderly ingredients: see IX.3; also Ch. VII below, where it is suggested that asking for further reasons for this state of affairs transcends the limits of explanation.

Ross's correction of ἢ for εἰ (εἰ) in the manuscript tradition (some more recent MSS. read ἡ:[2] see above) apparently is an ancient one: see L-M *app. crit. ad loc.*, cited above. For the use of ἤ ("i q εἰ δὲ μή", Bonitz 312 b 56 s.v.) cp. Arist. *EN* 1170 b 17 ὃ δ' ἐστὶν αὐτῷ αἱρετόν, τοῦτο δεῖ ὑπάρχειν αὐτῷ, ἢ ταύτῃ ἐνδεὴς εἶναι.[3]

In view of the economy of this idiom, I do not quite see why one should want to split up the sentence into a question and an answer,[4] put a colon after ἀδύνατον, and read ἧ ("comme la réponse a la faveur de Théophraste"), as L-M do. As said above, in the interpretation proposed here ἤ ... ἡ μετάβασις is not an answer but part of the question.

If there is any fixed difference between **μετάβασις** (see also εἰς ... τὸ βέλτιον ... ἡ μετάβασις in 8 a 14-5) and μεταβολή, it is by no means an evident one:[5]

Vent. 52 δύο γὰρ οὗτοι τρόποι μεταλλαγῆς ἢ περιισταμένων ἢ ἐκπνευσάντων τελέως. ὧν ἡ μὲν κατὰ τὴν περίστασίν ⟨ἐστι⟩ εἰς τοὺς ἐφεξῆς. (ἐγγυτάτω γὰρ αὕτη ⟨ἡ⟩ *μετάβασις, ἐν ᾗ καὶ ἀναστρέφει πολλάκις ἐπὶ τὸν αὐτόν*,[6] ὅταν ὑπὸ χειμῶνος ἀοριστία τις ᾖ), ἡ δὲ *κατὰ τὴν μεταβολὴν εἰς τοὺς ἐναντίους*.

Arist. *Cael.* 305 b 26-31 (305 b 3 ff. ἐνυπάρχον γὰρ ἕκαστον ἐκκρίνεσθαί φασιν (sc. Empedocles and Democritus), ὥσπερ ἐκ ἀγγείου τῆς γενέσεως οὔσης ἀλλ' οὐκ ἔκ τινος ὕλης, οὐδὲ γίγνεσθαι μεταβάλλοντος. ...) ὅτι μὲν οὖν οὐκ ἔστι τῇ ἐκκρίσει *ἡ εἰς ἄλληλα μετάβασις*, εἴρηται. λείπεται δ' *εἰς ἄλληλα μεταβάλλοντα* γίγνεσθαι. τοῦτο δὲ διχῶς· ἢ γὰρ τῇ μετασχηματίσει, καθ-

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[1] This conviction was at the basis of the third position of assuming at the level of elementary principles both matter and form, discussed in 7 a 7-10; see also 7 a 19 – b 5.

[2] See above; R-F *app. crit. ad loc.*

[3] "Now that which is desirable for him he must have, or he will be deficient in this respect", *RevOT*.

[4] In any case it cannot in all fairness be claimed that this interpretation is a modification of Ross's view, since, as far as I see, it cannot be maintained that with his correction of εἰ in ἤ Ross "suppose l'existence de deux questions: a) pourquoi le changement (= l'accroissement de la part d'ordre dans le monde) est-il impossible? b) pourquoi, si plus d'ordre est possible, le changement serait-il pour le pire?", as L-M (*ad loc.*) believe. (R-F render "and [demanding] an account of the reason why more of it is impossible or the change it would produce would be for the worse"; in their summary: "we must remember that it is a question how far definiteness (or law) extends in nature", xv.)

[5] Both terms may refer to a reversal of fortune in drama: see Lucas (1968) 115.

[6] "a shift back to the original", tr. Coutant/Eichenlaub.

ἅπερ ἐκ τοῦ αὐτοῦ κηροῦ γίγνοιτ' ἂν σφαῖρα καὶ κύβος, ἢ τῇ διαλύσει τῇ εἰς τὰ ἐπίπεδα, ὥσπερ ἔνιοί φασιν.

Arist. *Cael.* 306 a 3-5 οὔτε γὰρ εὔλογον ἓν μόνον ἄμοιρον γενέσθαι *τῆς μεταβάσεως*, οὔτε φαίνεται κατὰ τὴν αἴσθησιν, ἀλλ' ὁμοίως πάντα *μεταβάλλειν εἰς ἄλληλα*.

In the case of a human agent, however, μεταβαίνειν obviously is the proper term:

HP IV.11.5 ἐπεὶ δὲ εἰς τὴν πλάσιν μετέβησαν, καὶ ἡ τομὴ μετεκινήθη· ...[1]

CP I.3.5 τὰ δ' ἄλλα οὐχ ὁμοίως, ἀλλ' ἐπὶ τῶν ὑλημάτων καὶ ποιωδῶν ἐνίων τοῦτο συμβαίνει. πρὸς ἃ καὶ δεῖ μεταβῆναι τὸν λόγον· ὑπὲρ γὰρ τῶν δένδρων ἱκανῶς εἴρηται.[2]

—which seems to be why the expression μετάβασις εἰς ἄλλο γένος sounds familiar;[3] μετάβασις, therefore, does not in itself refer to a less continuous, more radical transition: compare e.g.

Arist. *HA* 588 b 10-1 ἡ δὲ μετάβασις ἐκ αὐτῶν (i.e. τῶν φυτῶν) εἰς τὰ ζῷα συνεχής ἐστιν, ...

Phys. 235 b 22-5 εἰ μὲν οὖν ἐν ἄλλῳ, οἷον ἐν τῷ Γ, τὸ εἰς τὸ Β μεταβεβληκός, πάλιν ἐκ τοῦ Γ μεταβάλλει εἰς τὸ Β· οὐ γὰρ ἦν ἐχόμενον τὸ Β· ἡ δὲ μεταβολὴ συνεχής.

and also

Arist. *GA* 778 b 25-31 διὰ γὰρ τὸ φαίνεσθαι προϊούσης τῆς ἡλικίας ἐγειρόμενα μᾶλλον, εὔλογον τοὐναντίον ἐν τῇ ἀρχῇ τῆς γενέσεως ὑπάρχειν, τὸν ὕπνον, ἔτι δὲ διὰ τὸ *τὴν μετάβασιν ἐκ τοῦ μὴ εἶναι εἰς τὸ εἶναι* διὰ τοῦ μεταξὺ γίνεσθαι· ὁ δ' ὕπνος εἶναι δοκεῖ τὴν φύσιν τῶν τοιούτων, οἷον τοῦ ζῆν καὶ τοῦ μὴ ζῆν μεθόριον, καὶ οὔτε μὴ εἶναι παντελῶς ὁ καθεύδων οὔτ' εἶναι.

Phys. 235 b 13-4 (235 b 6 ff. ἐπεὶ δὲ πᾶν τὸ μεταβάλλον ἔκ τινος εἴς τι μεταβάλλει, ἀνάγκη τὸ μεταβεβληκός, ὅτε πρῶτον μεταβέβληκεν, εἶναι ἐν ᾧ μεταβέβληκεν. ...) ἐπεὶ οὖν μία τῶν μεταβολῶν ἡ κατ' ἀντίφασιν, ὅτε *μεταβέβληκεν ἐκ τοῦ μὴ ὄντος εἰς τὸ ὄν*, ἀπολέλοιπε τὸ μὴ ὄν.[4]

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[1] "But when a change was made to the more elaborate style of playing [sc. the reed], the time of cutting the reeds was also altered", tr. HORT.

[2] Possibly also *CP* II.4.6 ὁμοίως δὲ καὶ ἐπὶ τῶν δένδρων ἔχειν τοῦτο, πλὴν ταῦτα μὲν ὅμοια διατελεῖν, τὸ δὲ σῶμα, ὅταν ἀνακομισθῇ, μεταβαίνειν εἰς τὴν τετρυμένην καὶ ἄκνισον: "except that the tree continues as before, whereas when the human body has recuperated it passes to the austere and fatless diet.", tr. EINARSON/LINK.

[3] Arist. *An. Post.* 75 a 38 οὐκ ἄρα ἔστιν ἐξ ἄλλου γένους μεταβάντα δεῖξαι; 97 b 28 f. διὸ δεῖ ἀπὸ τῶν καθ' ἕκαστα ἐπὶ τὰ καθόλου μεταβαίνειν, cp. *An. Pr.* 64 b 39; see also the use of μετάβασις for the transition of one figure of a syllogism to another, *An. Pr.* 51 a 22 ff.

[4] Plato, *Parm.* 162 C 4-6 καὶ κινούμενον ἄρα τὸ οὐκ ὂν ἓν πέφανται, ἐπείπερ καὶ μεταβολὴν ἐκ τοῦ εἶναι ἐπὶ τοῦ μὴ εἶναι ἔχον seems to be a special case, amongst other things because in this context μεταβαίνειν is used for locomotion, a shift from one place to another: 162 D 1, 9.

If any general difference could be formulated, μετάβασις would seem to be the more analytical term, μεταβολή referring rather to an actual instance: e.g.

Arist. *Cael.* 268 a 30 – b 5 ἀλλ' ἐκεῖνο μὲν δῆλον, ὡς οὐκ ἔστιν *εἰς ἄλλο γένος μετάβασις*, ὥσπερ ἐκ μήκους εἰς ἐπιφάνειαν, εἰς δὲ σῶμα ἐξ ἐπιφανείας· οὐ γὰρ ἂν ἔτι τὸ τοιοῦτον τέλειον εἴη μέγεθος· ἀνάγκη γὰρ γίγνεσθαι τὴν ἔκβασιν κατὰ τὴν ἔλλειψιν, οὐχ οἷόν τε τὸ τέλειον ἐλλείπειν· πάντῃ γάρ ἐστιν. (where, as contrasted with the examples above, the idea of a human agent is absent; otherwise πρόσθεσις would have been spoken of instead of ἔκβασις?)

CP I.9.2 ἴσως ⟨δ'⟩ οὐκ ἔχει ταὐτά γε (the seeds of wild trees) *μετάβασιν εἰς τὸ χεῖρον* (ἡ γὰρ ἀγριότης ἔσχατον), ἀλλ' ἡ εὐχυλία καὶ ἡ εὐσαρκία τούτων πρὸς ἄλληλα γίνεται διὰ τὸν ἀέρα καὶ ἁπλῶς τοὺς τόπους.

Od. 39 συμβαίνει δὲ τοῖς ἀνθίνοις (perfumes made from flowers) ἀκμάζειν μὲν ὡς ἐπὶ τὸ πᾶν μετὰ δίμηνον, *μεταβάλλειν δ' ἐπὶ τὸ χεῖρον* ἐνιαυτοῦ προελθόντος καὶ περικαταλαβούσης τῆς ὥρας ἐν ᾗ τὴν ἀκμὴν λαμβάνει τὸ ἄνθος.

CP II.13.4 ἀτοπώτατον δέ, καὶ θαυμάζεται μάλιστα ἐπὶ τῶν δένδρων, ἡ εἰς τὸ βέλτιον μεταβολή, ...· τὰς γὰρ ἐπὶ τὸ χεῖρον καὶ πολλὰς ὁρῶμεν καὶ πανταχοῦ, διὸ καὶ θαυμάζομεν. ἔστιν οὖν δῆλον ὅτι καὶ τὸ ἐπὶ τῶν σπερμάτων συμβαῖνον, ὅταν εἰς τὸ βέλτιον ᾖ, σχεδὸν ὅμοιον· ...

II.15.1 (...) εἰς δὲ τὸ χεῖρον μεταβολῆς[2] δῆλον ὡς ἐναντίαι (sc. αἰτίαι?), ... ἐνίοτε δὲ καὶ οἱονεὶ πηρώσει τινὶ μεταβάλλουσιν εἰς τὸ χεῖρον κολουόμενα κατὰ τὴν πρώτην γένεσιν τὰ φυτά, ...

III.1.6 ταῦτα (sc. air and locality) δὲ ἐναντία φαίνεται τοῖς παρὰ φύσιν ἡμερουμένοις (sc. φυτοῖς)· εἴς τε γὰρ ἀέρα μαλακώτερον μετατίθενται καὶ τροφὴν ἀλλοιοτέραν λαμβάνουσιν, ἐξ ἀμφοτέρων δὲ τούτων *ἡ μεταβολὴ* καὶ οἷον ἔκστασις τῆς φύσεως. ἐπιμαρτυρεῖ δέ πως καὶ ἐν αὐτοῖς τοῖς γεωργουμένοις τὸ μὴ φιλεῖν ἔνια τὴν ἀκριβῆ καὶ τὴν πολλὴν ἄγαν ἐξεργασίαν, ὥστε καὶ ταύτην ζητεῖν τινα ὅρον· καὶ τρόπον τινὰ οὐδὲν κωλύει κατὰ *τὴν μετάβασιν* οὕτως ἔνια μηδὲ ζητεῖν ὅλως.

IV.1.6 (..., πλὴν ὅτι) τὰ μὲν εἰς τὸ χεῖρον ἀεὶ μεταβάλλει, τὰ δὲ καὶ ἐπὶ τὸ βέλτιον, ἐὰν ἡ χώρα τοιάδε καὶ ὁ ἀήρ.

VI.15.3 μεταβολῆς γὰρ γινομένης οἱ μὲν (sc. τῶν χυλῶν) *εἰς τὸ βέλτιον οἱ δὲ εἰς τὸ χεῖρον μεταβάλλουσιν*. τοὺς μὲν γὰρ πέττει, τοὺς δ' οἷον ἐξίστησιν,[2] τὸ θερμόν· ἀνάγκη γάρ, ὅταν ἐν τῷ τέλει γίνηται, *τὴν μεταβολὴν* εἶναι *πρὸς τὸ χεῖρον*, ...

In that case the following—at first sight anomalous—use of μεταβολή should be explained as a case of assimilation to the preceding verb:

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[1] μεταβολῆς EINARSON/LINK; εἰς δὲ τὸ χεῖρον μεταβολαὶ MSS. Note that, if it is true that μετάβασις is the more analytical term, μετάβασις would have been more apposite in the text as read by EINARSON/LINK.

[2] "makes the concocted ones depart from their nature".

Arist. *Met.* 1074 b 25-7 δῆλον τοίνυν ὅτι τὸ θειότατον καὶ τιμιώτατον νοεῖ, καὶ οὐ μεταβάλλει· *εἰς χεῖρον γὰρ ἡ μεταβολή*,[1] καὶ κίνησίς τις ἤδη τὸ τοιοῦτον.

As the examples above show, the distribution of εἴς τι and ἐπί τι does not seem to reflect any obvious distinction in sense either: cp. MUELLER (1878) 17.

However this may be, in the present passage too the change denoted by μετάβασις is an object of analysis rather than an actual instance of change. It does not seem to be inherent in the choice of this term by itself that in the present context μετάβασις apparently implies a *gradual* change for the worse (the point of departure still being the position of assuming, at the level of elementary principles, both order and disorder, both form and matter (οἱ δ' ἄμφω, ἐν ἀμφοῖν, 7 a.7 ff.), which is motivated by the conviction that being as a whole consists of—a harmony of?—opposites). See also above.

To conclude, the discussion of (IV.1) the question whether one should assume elementary principles endowed with form or not (6 b 23 – 7 a 6), and of (IV.2) the distinction and evaluation of the doxographical positions (7 a 6 – b 5)—which comprises (2a) a criticism of the materialist position (7 a 10-9), and (2b) a discussion of the difficulties involved in the third, apparently most plausible position of assuming both matter and form (7 a 19 – b 5)—, is rounded off (IV.3) by Th.' pointing out the necessity of a further discussion of this problem in the broader context of the question why, in the cosmos as a whole, the portion of order is necessarily limited (7 b 5-8).

[1] "for change would be change to the worse", *RevOT.*

CHAPTER FIVE

V.1 (7 b 9-23): *'Rest', however, might be ascribed to the first principles only if this involves a better condition; it should not be ascribed to them if it involves a privation of activity (i.e., a lack of activity where this might have been present). Rest (ἠρεμία) however might be replaced by activity (ἐνέργεια), i.e. a superior kind of movement. For the axiom that there must be a first mover which is not in movement itself seems to be questionable: observation confirms that mover and moved may coincide. The instances of mind and God are a case in point.*

7 b 9-15 ἐν δὲ ταῖς ἀρχαῖς ... ἐν τοῖς αἰσθητοῖς·

δέ contrasts with μέν in 7 b 6: from the discussion of elementary principles in the preceding chapter Th. now returns to the nature of the first, immaterial principle(s), which were the starting-point of our discussion (ὅθεν ... καί) as anyone will realize (**δή**): see e.g. 4 a 15, 4 b 9, 19. For the limited reference of **ταῖς ἀρχαῖς** (the immaterial, and allegedly unmoved principles) see *ad* 6 b 23-8; one may note that, if the principles discussed in the preceding chapter would be identical to (or even of the same status as) those which will be discussed here, Th. could have returned to the topic of ἠρεμία (see below) without explicitly stating the theme or field to which the topic belongs (**ἐν** ταῖς ἀρχαῖς);[1] for its position at the beginning of the sentence, cp. 10 a 22.

Contra L-M, who assume that with ταῖς ἀρχαῖς Th., after having concluded "un premier argument relatif à la nature des principes, qui l'a conduit jusqu'à notre monde", now returns "aux principes eux-mêmes pour s'interroger sur un aspect différent, celui de leur immobilité.", that is to say that Th. is returning to the principles of Ch. IV (§ 14-5, 6 b 23 ff., which according to L-M ὁ πρῶτος λόγος refers to).

Apart from the contestable interpretation of ταῦτα ... ἐνταῦθά που in 7 b 5-6 as "ces phénomènes dans ce lieu-ci" (p. 325 above), it is not clear how the question of immobility could pertain to principles which also include (according to at least two of the conceptions discussed, including the most plausible one) *material* principles.

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[1] Cp. the common method of defining the field of discussion by means of περί (e.g. *CP* VI.15.1, *Sens.* 90, below).

ὁ πρῶτος λόγος, then, refers to the first part (or, the first chapter) of this treatise, presumably seen as the first argument[1] of the series (see μέχρι μὲν δὴ τούτων οἷον ἄρτιος ὁ λόγος, 5 a 5-6); compare

> *CP* VI.10.10 ἡ δ' ἁλμυρίς, εἴθ' ὑπὸ τῶν ῥιζῶν ἕλκεται, εἴθ' ὑπὸ τῆς τοῦ ἡλίου θερμότητος ἀναφέρεται, κατ' ἀμφοτέρους τοὺς τρόπους οὐκ ἂν ἀκίνητος ἀπὸ τῆς γῆς εἴη, περὶ οὗπερ ἦν *ὁ ἐξ ἀρχῆς λόγος*. (referring to VI.10.3),

or the slightly different phrase

> I.22.1 ἔχει δ' ἀπορίαν εὐθὺς *ἐπὶ τοῦ πρώτου λεχθέντος*, ὡς οὐκ ἔστιν τὰ καρπιμώτερα θερμότερα (referring to I.21.5).

Note that if we were meant to understand (what we are used to refer to as) the first chapter of this treatise to be in fact the lecture-notes for the first, introductory lecture[2] of a course, the plural might rather have been used: see e.g.

> Arist. *Pol.* 1278 b 17-9 εἴρηται δὴ *κατὰ τοὺς πρώτους λόγους*, ἐν οἷς περὶ οἰκονομίας διωρίσθη καὶ δεσποτείας, καὶ ὅτι φύσει μέν ἐστιν ἄνθρωπος ζῷον πολιτικόν. (referring to *Pol.* I.1.9, 1253 a 1 ff.)
>
> 1288 a 37 ff. (ἐπεὶ δὲ τρεῖς φαμὲν εἶναι τὰς ὀρθὰς πολιτείας, ...), *ἐν δὲ τοῖς πρώτοις* ἐδείχθη *λόγοις* ὅτι τὴν αὐτὴν ἀναγκαῖον ἀνδρὸς ἀρετὴν εἶναι καὶ πολίτου τῆς πόλεως τῆς ἀρίστης, φανερὸν ὅτι κ.τ.λ. (referring to III.2.1 ff., 1276 b 16 ff.).

Compare also

> *PA* 682 a 1-4 τοῖς δ' ἐντόμοις τὸ μὲν τῆς τοιαύτης ἀρχῆς μόριον, ὥσπερ ἐν τοῖς πρώτοις ἐλέχθη λόγοις, μεταξὺ κεφαλῆς καὶ τοῦ περὶ κοιλίαν ἐστὶ κύτους.—apparently referring to *HA* IV.7, 531 b 34: FORSTER, LOUIS *ad loc.*[3]

Among other conceivable problems (**καί** 7 b 10), one could certainly raise one with respect to the question of the rest assumed (cp. Ch. II, 5 a 23-5). The accusative **τὸ περὶ τῆς ἠρεμίας**[4] constitutes the topic of the sentence.

The verb ἀπορεῖν is usually[5] followed by a (direct or indirect) question: πότερον ... ἤ ...: 6 a 6-10, 6 b 24-6; εἰ ...: 6 a 13, also *Sens.* 12, 23, 35, 90

[1] For ordinals with λόγος referring to a series of arguments, see e.g. 184.130 FHS&G τὸν δὲ τέταρτον καὶ λοιπὸν λόγον ἀκριβωτέον ὧδε.

[2] Though instances like those quoted in the text show that there is no apparent correspondence between what is called 'first' and the beginning of Peripatetic treatises as we have them.

[3] This reference, incidentally, would seem to pose a problem for LOUIS' own supposition that *PA* "a été conçu par Aristote comme le premier ouvrage d'une série de traités biologiques", whereas *HA* "n'est qu'un simple recueil de faits, une collection de documents réunies en vue de la rédaction des traités biologiques." LOUIS (1956) XXII.

[4] For τὸ περί, this time with the genitive, presenting the question at issue, see *ad* 7 b 1-2.

[5] Without a complement *Lap.* 45 διὸ καὶ ἀποροῦσί τινες οὐκ ἄγαν οἰκείως ἀποροῦντες.; also *CP* I.16.4 οὐκ ἀλόγως δ' ἂν οὔτε ἀπορήσειεν οὔτε ἀξιώσειεν· ...

(ἀπορήσειεν δ' ἄν τις καὶ περὶ τῶν ὀσμητῶν εἰ ἔστιν εἴδη); τί ... *Sens.* 12; διὰ τί ...: *Od.* 10, *Ign.* 51, *Vert.* 9, *CP* I.12.7, 15.3. The topic is sometimes announced (proleptically, as it were)[1] in the accusative: compare

CP I.13.2 ἐκεῖνο δ' ἄν τις ἴσως ἐν τούτοις ἀπορήσειεν· πότερα καὶ πεπάνσεις ὅμοιαι τῶν καρπῶν ἢ ἐνδεέστεραι γίνονται, ...
I.16.10 ἐξ αὐτοῦ δὲ τούτου τάχ' ἄν τις πάλιν ἀπορήσειεν κοινήν τινα ἀπορίαν καὶ καθόλου, πότερα τὴν φύσιν ἐκ τῶν αὐτομάτων μᾶλλον θεωρητέον ἢ ἐκ τῶν κατὰ τῆς ἐργασίας, ...
Arist. *Met.* 1085 a 23-6 πάντων δὲ κοινὸν τούτων ὅπερ ἐπὶ τῶν εἰδῶν τῶν ὡς γένους συμβαίνει διαπορεῖν, ὅταν τις θῇ τὰ καθόλου, πότερον τὸ ζῷον αὐτὸ ἐν τῷ ζῴῳ ἢ ἕτερον αὐτοῦ ζῴου.
CP VI.15.1 (ὅσα ... ,) περὶ τούτων ἀπορήσειεν ἄν τις ὃ καὶ πρότερον ἐλέχθη· διὰ τί τὸ ἄνθος οὐκ εὔοσμον αὐτῶν (ἢ οὐ κατὰ λόγον).

H.l. the topic τὸ περὶ τῆς ἠρεμίας is developed in a hypothetical disjunction introduced by γάρ (**εἰ μὲν γὰρ ... · εἰ δ' ...**), which states the consequence of both possibilities (a transformation, as it were, of *εἰκότως ἄν τις καὶ τὸ περὶ τῆς ἠρεμίας ἀπορήσειεν, πότερον ὡς βέλτιον (ἀνάψειεν γὰρ ἄν), ἢ ὡς ἀργία καὶ στέρησίς τις κινήσεως (οὐ γὰρ ἀνάψει) · ...; compare

Arist. *Met.* 1085 a 34 ff. περὶ ὧν οὐδὲν ἧττον συμβαίνει τὰ αὐτὰ ἀπορεῖν. εἰ μὲν γὰρ μία ἡ ὕλη, ταὐτὸ γραμμὴ καὶ ἐπίπεδον καὶ στερέον (...)· εἰ δὲ πλείους αἱ ὗλαι ...

εἰκότως expresses that this problem is likely to be raised, apparently because of the inappropriate connotations of ἠρεμία: see 7 b 12-3. As compared with εὐλόγως/εὔλογον, which expresses that something is considered likely on the basis of (one's assumptions regarding) the organization of reality (see *ad* 4 a 13), εἰκότως/εἰκός seems to be the broader—and, if you wish, less scientific—term, probability belonging to the sphere of τὸ πιθανόν without necessarily connoting a basis in reality,[2] although of course εἰκός often does so too, especially in scientific contexts; see e.g.

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[1] Though (1) the construction may shift along the way: *CP* I.16.3 τάχα δ' ἄν τις ἀπορήσειεν ἐκεῖνο, καὶ ἀξιώσειεν ὃ τὸ ἰσχυρότερον κατακρατεῖ, τοῦτο καὶ τὰ ἀσθενέστερα κατακρατεῖν · ... , and (2), conversely, τοῦτο may *summarize* the ἀπορία formulated in the preceding: Arist. *Meteor.* 355 b 20-5 τὸ δὲ ζητεῖν τὴν ἀρχαίαν ἀπορίαν, διὰ τί τοσοῦτον πλῆθος ὕδατος οὐδαμοῦ φαίνεται (καθ' ἑκάστην γὰρ ἡμέραν ποταμῶν ῥεόντων ἀναρίθμων καὶ τὸ μέγεθος ἀπλέτων οὐδὲν ἡ θάλαττα γίγνεται πλείων), *τοῦτο* οὐδὲν μὲν ἄτοπον *ἀπορῆσαί* τινας, οὐ μὴν ἐπιβλέψαντί γε χαλεπὸν ἰδεῖν. Cp. also *ibid.* 339 a 2-3 ἐν οἷς (sc. the phenomena listed in the preceding) τὰ μὲν ἀποροῦμεν, τῶν δὲ ἐφαπτόμεθά τινα τρόπον · ...

[2] As appears from Arist. *Poet.* 1460 a 26-7 προαιρεῖσθαί τε δεῖ ἀδύνατα εἰκότα μᾶλλον ἢ δυνατὰ ἀπίθανα.

HP V.5.3 ἄτοπον δ' ἂν δόξειεν ὅτι ἐν μὲν τοῖς ξύλοις τοῖς στρογγύλοις ἄλυτος ἡ μήτρα καὶ ἀκίνητος, ἐν δὲ τοῖς παρακινηθεῖσιν, ἐὰν μὴ ὅλως ἐξαιρεθῇ, κινεῖ καὶ παραστρέφει· μᾶλλον γὰρ εἰκὸς γυμνωθεῖσαν ἀποθνήσκειν.

CP II.15.1 καίτοι τά γε τῆς ἀμπέλου φυτὰ καὶ ἀπόλλυται πονοῦντα· τὰ δὲ μᾶλλον, καὶ μεταβάλλειν εἰκὸς μᾶλλον ἦν· τῇ γὰρ ἀμυγδαλῇ καὶ τὸ ὅλον φαίνεται παράλογον, ἰσχυρότερον γὰρ τῶν δένδρων.

II.17.9 τὴν δ' ἰσχὺν εὐλόγως ἔχει, καὶ διὰ τὴν εὐτροφίαν, καὶ μάλιστ' ἴσως διὰ τὴν αὐτοῦ φύσιν. ἰσχυρότερα δὲ εἰκὸς τὰ ἐν ταῖς ἐλάταις καὶ πεύκαις εἶναι· πλείων γὰρ ἡ τροφὴ καὶ λιπαρωτέρα.

Accordingly, εἰκός/εἰκότως seems to be the proper term in contexts where human analysis predominates,[1] as in the case of signs of the weather:

[Th.] *Sign.* 44 ἐὰν τὸ μετόπωρον εὐδιεινὸν παρὰ τὸ εἰκὸς γένηται, τὸ ἐάρ γίνεται ψυχρὸν ὡς τὰ πόλλα; also

Arist. *Meteor.* 372 b 20 ἐὰν μὲν γὰρ μήτε καταμαρανθῇ μήτε διασπασθῇ (sc. ἡ σύστασις), ἀλλ' ἐαθῇ τὴν φύσιν ἀπολαμβάνειν τὴν αὐτῆς, ὕδατος εἰκότως σημεῖόν ἐστι· ...[2]

of the ascription of phenomena to a certain class:

Plato *Tim.* 48 B 5 – C 2 νῦν γὰρ οὐδείς πω γένεσιν αὐτῶν μεμήνυκεν, ἀλλ' ὡς εἰδόσι, πῦρ ὅ τί ποτέ ἐστι καὶ ἕκαστον αὐτῶν, λέγομεν ἀρχὰς αὐτὰ τιθέμενοι, στοιχεῖα τοῦ παντός, προσῆκον αὐτοῖς οὐδ' ἂν ὡς ἐν συλλαβῆς εἴδεσι μόνον εἰκότως ὑπὸ τοῦ καὶ βραχὺ φρονοῦντος ἀπεικασθῆναι.

of questions of terminology:

ibid. 62 A 1-5 (...) λογιστέον ἀναμιμνῃσκομένοις τὴν τοῦ σχήματος αὐτοῦ γένεσιν, ὅτι μάλιστα ἐκείνη καὶ οὐκ ἄλλη φύσις διακρίνουσα ἡμῶν κατὰ σμικρά τε τὰ σώματα κερματίζουσα τοῦτο ὃ νῦν θερμὸν λέγομεν εἰκότως τὸ πάθημα καὶ τοὔνομα παρέσχε.

and in logical contexts: see

90B4-9 FHS&G (= Philop. *In An. Pr.* 25 a 16) φασὶ γὰρ ὅτι, εἰ τὸ Α κατὰ μηδενός ἐστι τοῦ Β, πάντων τῶν μερῶν αὐτοῦ κεχώρισται· τὸ δὲ κεχωρισμένων κεχωρισμένου κεχώρισται· ὥστε καὶ τὸ Β οὐδενὶ τῷ Α ὑπάρξει. τὸ γὰρ κεχω-

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[1] This may be the reason why in *De sensibus* with its critical discussion of doxographical positions εἰκός is comparatively frequent: e.g. *Sens.* 53 καίτοι τούς γε τύπους οὐχ ἧττον εἰκὸς διαμένειν νυκτός, ὅσῳ ἐμψυχότερος ὁ ἀήρ. ("And yet it would be but fair to assume that these imprints would persist at night, since then the air is so much cooler." (tr. Stratton); 71 ἔτι δὲ τὸ θερμόν τε καὶ ψυχρόν, ἅπερ ἀρχὰς τιθέασιν, εἰκὸς ἔχειν τινὰ φύσιν· εἰ δὲ ταῦτα καὶ τὰ ἄλλα. "Moreover both heat and cold, which are supposed to be the primal source of things, probably have some objective reality; but if these, then the others also." (*ibid.*).

[2] "For if it [the halo] neither fades nor breaks, but is allowed to reach its full development, it is reasonable to regard it as a sign of rain", tr. Lee.

ρισμένον τῶν πρός τί ἐστι· τινὸς γάρ ἐστι κεχωρισμένον· τὰ δὲ πρός τι πρὸς ἀντιστρέφοντα λέγεται· *εἰκότως ἄρα* καὶ τὸ Β οὐδενὶ τῷ Α ὑπάρχει.

The aspect of human analysis is obviously relevant in dialectical[1] contexts, as here, where the author expresses an opinion concerning the reasonableness of posing a particular question (for **ἄν τις καὶ ... ἀπορήσειεν**, see *ad* 5 b 10-1); compare

Plato *Tim.* 49 B 6-7 πῶς οὖν δὴ τοῦτ' αὐτὸ καὶ πῇ καὶ τί περὶ αὐτῶν εἰκότως διαπορηθέντες ἂν λέγοιμεν;[2] also

Gorg. 463 D 6 – E 1 [ ] μὰ τὸν Δία, ὦ Σώκρατες, ἀλλ' ἐγὼ οὐδὲ αὐτὸς συνίημι ὅτι λέγεις. [ ] εἰκότως γε, ὦ Γοργία· οὐδὲν γάρ πω σαφὲς λέγω, ...

Soph. 231 C 3 [ ] λεγέσθω μέν· ἀπορῶ δὲ ἔγωγε ἤδη διὰ τὸ πολλὰ πεφάνθαι, τί χρή ποτε ὡς ἀληθῆ λέγοντα καὶ διισχυριζόμενον εἰπεῖν ὄντως εἶναι τὸν σοφιστήν. [ ] εἰκότως γε σὺ ἀπορῶν. ("You may well be puzzled.", tr. CORNFORD).

The first alternative of the hypothetical disjunction concerns the possibility that the condition of ἠρεμία ascribed to the principles involves a better state: **ὡς βέλτιον** sc. τι (probably sc. ὄν rather than λεγόμενον, as may be deduced from its counterpart ὡς ἀργία καὶ στέρησίς τις κινήσεως); cp. *Od.* 66 ὡς δὲ βέλτιόν τι τὸ ἐξ ἀμφοῖν ἔργον εὑρεῖν εἰ μὴ ἀδύνατον.[3] This 'better state' seems to amount to what in the first chapter was said to be something to be grasped "ὑπεροχῇ", i.e. as being superior to all things (but difficult to be further specified): see 4 b 13-8; see also the conclusion to that chapter: ἁπλῶς ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν (5 a 9-10). As seems to be implied by ἀλλ' εἴπερ, τὴν ἐνέργειαν ἀντιμεταλλακτέον, modifying the *second* alternative (see below), ἠρεμία here stands for a condition which carries none of the negative connotations which commonly adhere to it; cp. the doxographic report on Xenophanes ascribed to Th.,

224.21-8 FHS&G (= Simpl. *In Phys.* 184 b 15) παραπλησίως δὲ *καὶ τὴν κίνησιν ἀφαιρεῖ καὶ τὴν ἠρεμίαν.* ἀκίνητον μὲν γὰρ εἶναι τὸ μὴ ὄν· οὔτε γὰρ ἂν εἰς αὐτὸ ἕτερον οὔτε αὐτὸ πρὸς ἄλλο ἐλθεῖν· κινεῖσθαι δὲ τὰ πλείω τοῦ

[1] For the implications of this term, and the question of its application to this treatise as a whole, see Introduction, pp. 3 ff.

[2] "How then are we to deal with this point, and what is the question that we should properly raise concerning it?", tr. ARCHER-HIND.
For the optative cp. also Soph. *OC* 974-7 εἰ δ' αὖ φανεὶς δύστηνος, ὡς ἐγὼ 'φάνην, / ἐς χεῖρας ἦλθον πατρὶ καὶ κατέκτανον, / μηδὲν ξυνιεὶς ὧν ἔδρων εἰς οὕς τ' ἔδρων, / πῶς ἂν τό γ' ἆκον πρᾶγμ' ἂν εἰκότως ψέγοις; ("how couldst thou justly blame the unknowing deed?", tr. JEBB).

[3] "It would indeed be difficult, if not impossible, to find a case in which mixture is an improvement to the odour", tr. HORT.

ἑνός· ἕτερον γὰρ εἰς ἕτερον μεταβάλλειν, ὥστε καὶ ὅταν ἐν ταὐτῷ μένειν λέγειν καὶ μὴ κινεῖσθαι

> ἀεὶ δ' ἐν ταὐτῷ μίμνει κινούμενον οὐδέν,
> οὐδὲ μετέρχεσθαί μιν ἐπιπρέπει ἄλλοτε ἄλλῃ,

οὐ κατὰ τὴν ἠρεμίαν τὴν ἀντικειμένην τῇ κινήσει μένειν αὐτό φησιν, ἀλλὰ *κατὰ τὴν ἀπὸ κινήσεως καὶ ἠρεμίας ἐξῃρημένην μονήν.*

In the present passage it is stated without further argument that ἠρεμία, if it involves such a condition, might well be attached to the principles (**ἀνάψειεν**[1] **ἂν ταῖς ἀρχαῖς**). The optative expresses that the author does not commit himself: with this proviso those who are responsible for the problem by endowing the principles with rest might, as far as he is concerned, well do so.

On the other hand, if ἠρεμία involves **ἀργία** (here of course in the 'active' sense:[2] "inertness", "inactivity")[3] and a privation of movement (**στέρησίς τις κινήσεως**), then one will not attach it to the principles: the actuality of presentation (the future tense states what will actually happen, as contrasted with the optative in the first alternative) provides modal force.

The conception of ἠρεμία as a privation of κίνησις involves the absence or lack of movement where it might have been present: στέρησις[4] presumably in contradistinction to ἀπόφασις, which signifies that something simply does not apply: cp. 5 a 8-13.[5] This second alternative, explicitly rejected here[6] (though allowing of some modification: see ἀλλ' εἴπερ κ.τ.λ., below), actually is identical to the Aristotelian conception of ἠρεμία; see e.g.

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[1] For the verb, see *ad* 6 b 13.

[2] Contrast *Lap.* 27 ἔστι δέ τις αὐτῆς ἐργασία πρὸς τὸ λαμπρόν· ἀργὴ ("unworked") γὰρ οὖσα οὐ λαμπρά.; ἀργία of the land, 359A.22 FHS&G.

[3] ἀργία is used as the opposite of ἐνέργεια in Arist. *DA* 416 b 2-3 ὁ δὲ τέκτων μεταβάλλει μόνον εἰς ἐνέργειαν ἐξ ἀργίας, *EE* 1219 b 19 ... ἀργία ψυχῆς ὁ ὕπνος ἀλλ' οὐκ ἐνέργεια.

[4] Cp. *CP* VI.4.3 εἰ οὖν ἡ μὲν στέρησις ἐν ἀτελείᾳ τινὶ καὶ ἐνδείᾳ, ταῦτα (sc. the other animals, as compared to men) δὲ καὶ γεννᾷ καὶ ἐκτρέφει τὰ ὅμοια, καὶ ἰσχυρότερα πολὺ τῶν ἑτέρων, οὐκ ἂν εἴησαν κατὰ στέρησιν.

[5] Note the similarity between the assertion in 5 a 12-3 that the ἀπόφασις is ἐν ὑψηλοτέρῳ τε καὶ ἀληθινωτέρῳ λόγῳ, and the observation here that ἐνέργεια, which replaces ἠρεμία, approaches ἠρεμία involving 'a better state' (ὡς βέλτιον 7 b 11): see below.

[6] Cp. Th.' rejection, in *CP* VI.4.2-7, of 'privative' flavours (ὡς στερήσεις, which would involve a certain ἀτέλεια and ἔνδεια: 4.3), which would be valid if "we are to put nature under the head of what is best" (εἰ μὲν εἰς τὸ ἄριστον δεῖ τάττειν τὴν φύσιν, 4.2; "Aristotle's view", Einarson/Link *ad loc.*). For Th.' conclusion, see VI.4.6-7: καὶ φανερὸν ἂν δόξειεν ὡς οὐκ ἔστιν ἁπλῶς μεμερισμένα, τὸ μὲν ὥσπερ φυσικόν, τὸ δ' ὡς ἐν στερήσει καὶ παρὰ φύσιν. ἀλλὰ καὶ τὸ ἡμῖν ἄτροφον ἑτέροις τρόφιμον, καὶ τὸ ἄλλοις τρόφιμον, ἄλλοις ἄτροφον.

Arist. *Phys.* 226 b 10-6 ἀκίνητον δ' ἐστὶ τό τε ὅλως ἀδύνατον κινηθῆναι (ὥσπερ ὁ ψόφος ἀόρατος), καὶ τὸ ἐν πολλῷ χρόνῳ μόλις κινούμενον (ὃ λέγεται δυσκίνητον), καὶ τὸ πεφυκὸς μὲν κινεῖσθαι καὶ δυνάμενον, μὴ κινούμενον δὲ τότε ὅτε πέφυκε καὶ οὗ καὶ ὥς, *ὅπερ ἠρεμεῖν καλῶ τῶν ἀκινήτων μόνον· ἐναντίον γὰρ ἠρεμία κινήσει, ὥστε στέρησις ἂν εἴη τοῦ δεκτικοῦ.*
See also 229 b 25; 234 a 32; 239 a 13; 264 a 27 (ἡ γὰρ ἠρεμία στέρησις τῆς κινήσεώς ἐστιν); *Met.* 1068 b 21 ff.

The negative statement οὐκ ἀνάψει is modified by the mention of a possible way of evading this verdict introduced by **ἀλλ' εἴπερ**: "but if anything" (sc. in the sphere of other-than-κίνησις), one should use the term ἐνέργεια instead, which apparently is conceived of as a positive state.[1]
For the use of this phrase, see 11 b 9, 11 b 16; also

CP VI.5.1 ὅλως μὲν γὰρ ἢ οὐδέν, ἢ βραχύ τι πάμπαν, ἐστὶν ἐν τοῖς ἄλλοις ζῴοις τὸ τὴν εὐωδίαν διῶκον αὐτῆς χάριν, ἀλλ' εἴπερ, κατὰ συμβεβηκός, ...
Arist. *An. Post.* 91 b 32-4 ἀλλὰ συλλογισμὸς ὅμως οὐκ ἔστιν, ἀλλ' εἴπερ, ἄλλον τρόπον γνωρίζειν ποιεῖ.
Met. 1070 a 13-9 ἐπὶ μὲν οὖν τινῶν τὸ τόδε τι οὐκ ἔστι παρὰ τὴν συνθετὴν οὐσίαν (οἷον οἰκίας τὸ εἶδος, εἰ μὴ ἡ τέχνη ...), ἀλλ' εἴπερ, ἐπὶ τῶν φύσει· διὸ δὴ οὐ κακῶς Πλάτων ἔφη ὅτι εἴδη ἐστὶν ὁπόσα φύσει, εἴπερ ἔστιν εἴδη, ἀλλ' οὐ τούτων οἷον πῦρ σὰρξ κεφαλή· ...
(and my favourite instance:)
EN 1155 b 29-31 γελοῖον γὰρ ἴσως τῷ οἴνῳ βούλεσθαι τἀγαθά, ἀλλ' εἴπερ, σῴζεσθαι βούλεται αὐτὸν ἵνα αὐτὸς ἔχῃ.[2]

For the (unparalleled?) compound **ἀντιμεταλλάσσω** cp. JAEGER (1938) 23:

"Ein Charakteristikum der hellenistischen Prosa sind die zahlreichen Verbalkomposita mit zwei oder drei Präpositionen, deren Neubildung sich teils durch die Abschwächung der Kraft der einfachen Präposition erklärt, teils dem Bedürfnis nach feinerer Differenzierung entspricht." The instances adduced for Diocles include συγκαταλαμβάνω, προπεριπατέω, συνδιαδίδωμι, προδιαναπαύω.

Cp., for Th., HINDENLANG (1910) 150 (e.g. ἀναπόμεικτος, ἀνεπίδοτος, προαπόπτωσις), 152 (e.g. διεκπνοή, ἐναπόμιξις, προκαταύλησις), and the 46 occurrences of verbs compounded with a double preposition, 155 f. (e.g. ἐπισυμμύω, προαποπίπτω, συνεπιλάμπω).

For the productivity of the combination ἀντιμετα- in the context of terminological questions, see LSJ s.vv.; e.g. Philod. I.159 (XVII.17-21) διὰ τίνας αἰτίας ἀντιμεταληπτέον λέξεις ἀντὶ λέξεων καὶ τακτέον οὕτως ἀλλ'

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[1] Cp. Prisc. *Metaphr.* 8.15 f. οὐ γὰρ στέρησις φωτὸς τὸ σκότος ἀλλ' ἐνέργεια καὶ αὐτό.
[2] "for it would surely be ridiculous to wish wine well; if one wishes anything for it, it is that it may keep, so that one may have it oneself", *RevOT.*

οὐχ οὕτως ("*one must use instead, substitute*", LSJ s.v.); A.D. *Adv.* 130.14 αὐτὸ τὸ δεῖ ἀντιμεταλάβοι ἀντὶ τοῦ λείπει ("*use* a form *in place of* another", *ibid.*).

ἀντιμεταλλακτέον, which is attested in one manuscript only (D; τι μεταλλακτέον PJC¹LA; for further data, see L-M, *app.crit.*), thus seems to be quite apposite, in addition to being preferable from a textcritical point of view: see L-M *ad loc.*

As appears from the fact that it is contrasted with κίνησις, **ἐνέργεια** is used here in an Aristotelian sense as an equivalent of ἐντελέχεια: see *ad* 5 a 7. Nevertheless the more technical Aristotelian rendering "actuality" is not really appropriate here because it would spoil Th.' polemics in the following.[1] ἐνέργεια would do better than ἠρεμία in so far as it is prior to (**προτέραν**) and more 'honourable' (**τιμιωτέραν**) than ἠρεμία, presumably because it does *not* involve privation.

To Aristotle τὸ τίμιον[2] is 'beyond praise', in so far as it does not stand in any relation to anything outside itself, as opposed to τὸ ἐπαινετόν, which "is praised because it stands in a certain relation to something else" (NUSSBAUM (1978) 339); see

Arist. *EN* 1101 b 12 ff. φαίνεται δὴ πᾶν τὸ ἐπαινετὸν τῷ ποιόν τι εἶναι καὶ πρός τί πως ἔχειν ἐπαινεῖσθαι· τὸν γὰρ δίκαιον καὶ τὸν ἀνδρεῖον καὶ ὅλως τὸν ἀγαθόν τε καὶ τὴν ἀρετὴν ἐπαινοῦμεν διὰ τὰς πράξεις καὶ τὰ ἔργα, ... (b 21) εἰ δ' ἐστὶν ὁ ἔπαινος τῶν τοιούτων, δῆλον ὅτι τῶν ἀρίστων οὐκ ἔστιν ἔπαινος, ἀλλὰ μεῖζόν τι καὶ βέλτιον, καθάπερ καὶ φαίνεται· τούς τε γὰρ θεοὺς μακαρίζομεν καὶ εὐδαιμονίζομεν καὶ τῶν ἀνδρῶν τοὺς θειοτάτους μακαρίζομεν· ... (1102 a 1 ff.) ..., ἡμῖν δὲ δῆλον ἐκ τῶν εἰρημένων ὅτι ἐστὶν ἡ εὐδαιμονία τῶν τιμίων καὶ τελείων. ἔοικε δ' οὕτως ἔχειν καὶ διὰ τὸ εἶναι ἀρχή· ταύτης γὰρ χάριν τὰ λοιπὰ πάντα πάντες πράττομεν, τὴν ἀρχὴν δὲ καὶ τὸ αἴτιον τῶν ἀγαθῶν τίμιόν τι καὶ θεῖον τίθεμεν.

MA 700 b 32-5 τὸ δὲ αἴδιον καλόν, καὶ τὸ ἀληθῶς καὶ πρώτως ἀγαθὸν καὶ μὴ ποτὲ μὲν ποτὲ δὲ μή, θειότερον καὶ τιμιώτερον ἢ ὥστ' εἶναι πρὸς ἕτερον.[3]

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[1] Cp. Arist. *Met.* 1047 a 30 ἐλήλυθε δ' ἡ ἐνέργεια τοὔνομα, ἡ πρὸς τὴν ἐντελέχειαν συντιθεμένη, καὶ ἐπὶ τὰ ἄλλα ἐκ τῶν κινήσεων μάλιστα· δοκεῖ γὰρ ἡ ἐνέργεια μάλιστα ἡ κίνησις εἶναι. In contexts such as these, translations tend to be confusing: "The word 'actuality', which we connect with fulfillment, has, strictly speaking, been extended from movements to other things; for actuality in the strict sense is identified with movement.", *RevOT*. See RIST (1989) 105 ff.

[2] See also *ad* 6 b 28.

[3] πρὸς ἕτερον Bekker, Nussbaum; πρότερον MSS.; πρότερόν τι Jaeger.

Similarly, the point here apparently is that ἐνέργεια is τιμιωτέραν than ἠρεμία-which-does-*not*-involve-a-better-condition, because ἐνέργεια does not involve privation of activity (see ἀργία, above): ἐνέργεια, being equivalent to ἐντελέχεια, involves a ἕξις, a positive state.

Aristotle recognized himself that the ascription of ἠρεμία to the principles poses a problem in so far as it in fact implies a positive state prior to it, see Arist. *Cael.* 286 a 25-8 ἡ γὰρ αὐτὴ ὕλη τῶν ἐναντίων, καὶ τῆς στερήσεως πρότερον ἡ κατάφασις, λέγω δ' οἷον τὸ θερμὸν τοῦ ψυχροῦ. ἡ δ' ἠρεμία καὶ τὸ βαρὺ λέγονται κατὰ στέρησιν κουφότητος καὶ κινήσεως. Also *Phys.* 251 a 26-7 ἦν γάρ τι αἴτιον τῆς ἠρεμίας, ἡ γὰρ ἠρέμησις στέρησίς τις κινήσεως. For Aristotle's endeavours to dissociate ἐνέργεια from the aspect of striving towards an (external) end, which is considered to be characteristic of κίνησις, see *ad* 5 a 5-8, pp. 148-50 above.

It is to be noted that, as the notion of ἐνέργεια characterizes the positive state of the principles which do not have κίνησις (the latter accordingly being characteristic of the objects of sense: **τὴν δὲ κίνησιν ἐν τοῖς αἰσθητοῖς**), it actually approaches the notion of ἠρεμία, which was presented in the first alternative as involving a better state. This happens at the cost of the clarity of the disjunction, but at the same time it is suggestive of the comparative plausibility of the option that remains (see *ad* ἀνάψειεν ἂν ταῖς ἀρχαῖς, above).

What the discussion of the problem which is involved in ascribing the condition of ἠρεμία to the principles comes down to, then, is to take this condition in its most positive sense, in which sense it alternatively could be called ἐνέργεια; for the fact that this special condition as ascribed to the principles may be referred to either as ἀκινησία (or, ἠρεμία) or as ἐνέργεια, see the characterization of the Aristotelian position in Ch. I.5 and the provisional conclusion as to the nature of the principles in I.6.

In the additional motivation of this preference for ἐνέργεια Th. will modify this (mainly Aristotelian) conception of the condition of the principles[1] by questioning the distinction between κίνησις and ἐνέργεια as characteristic of the objects of sense and the principles respectively: see next note.

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[1] Which, noticeably, is not unlike that ascribed to Th. himself by Iamblichus, *ap.* Simpl. *In Cat.* 304.32 ff. Kalbfleisch (152 FHS&G; cp. Steinmetz (1964) 153 n.1): ἔτι δὲ δεῖ πείθεσθαι Θεοφράστῳ· τούτῳ γὰρ δοκεῖ μὲν χωρίζεσθαι τὴν κίνησιν τῆς ἐνεργείας, εἶναι δὲ τὴν μὲν κίνησιν καὶ ἐνέργειαν ὡς ἂν ἐν αὐτῇ περιεχομένην, οὐκέτι μέντοι καὶ τὴν ἐνέργειαν κίνησιν· τὴν γὰρ ἑκάστου οὐσίαν καὶ τὸ οἰκεῖον εἶδος ἐνέργειαν εἶναι ἑκάστου, *μὴ οὖσαν ταύτην κίνησιν*. καὶ γὰρ ἡ τελειότης καὶ ἐν τοῖς νοητοῖς καὶ *φύσει ἀκίνητοις* εἶναι οὐ κεκώλυται· εἰσὶν δὲ καὶ ἐν τοῖς αἰσθητοῖς πολλαὶ τοιαῦται, οἷον κατὰ τὸ σχῆμα τοῦ ἀνδριάντος· ἕστηκεν γὰρ τὸ σχῆμα κατὰ τὴν αὐτὴν τελειότητα.

This testimony conflicts with 10 a 11-2: see commentary *ad loc.*

7 b 15-9 ἐπεὶ ... ζητεῖ.

κινούμενον εἶναι τὸ κινοῦν R-F; κινοῦν εἶναι τὸ κινοῦν MSS.; κινοῦν εἶναι τὸ κινούμενον coni. USENER (1861) 276.

With **ἐπεί** Th. adds a reason for preferring ἐνέργεια which affects the essence of the Aristotelian principle of an *unmoved* first mover.

One reason at least (**γε**) for assuming that the principles[1] are in rest may be questioned: the axiom that it is impossible that what imparts movement is in movement itself invariably (**ἀεὶ κινούμενον εἶναι τὸ κινοῦν**, ἀεί dominating the phrase as a whole), since in that case there would be an infinite regress (**οὐ γὰρ ἂν εἴη πρῶτον**).

Ross' emendation κινούμενον of MSS. κινοῦν (see above)[2] seems beyond doubt: cp. μὴ ἀεὶ τὸ κινοῦν ἕτερον εἶναι καὶ ὃ κινεῖ, 7 b 20-1, and συνάπτει δέ πως ἡ νῦν ἀπορία[3] καὶ πρὸς τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν, 10 a 19-21.

This reason, here presented as one among other conceivable reasons for assuming ἠρεμία (or, ἀκινησία) in the case of the principles, seems to have been a primary reason for Aristotle to postulate an unmoved first mover in the first place; see e.g.

Arist. *Phys.* 258 b 10-1 ἐπεὶ δὲ δεῖ κίνησιν ἀεὶ εἶναι καὶ μὴ διαλείπειν, ἀνάγκη εἶναί τι ἀΐδιον ὃ πρῶτον κινεῖ, εἴτε ἓν εἴτε πλείω, καὶ τὸ πρῶτον κινοῦν ἀκίνητον.

259 b 22-8 ὥστ' εἴπερ ἀνάγκη συνεχῶς εἶναι κίνησιν, εἶναί τι δεῖ τὸ πρῶτον κινοῦν ἀκίνητον καὶ κατὰ συμβεβηκός, εἰ μέλλει ... ἔσεσθαι ἐν τοῖς οὖσιν ἄπαυστός τις καὶ ἀθάνατος κίνησις καὶ μένειν τὸ ὂν αὐτὸ ἐν αὑτῷ καὶ ἐν τῷ αὐτῷ· τῆς γὰρ ἀρχῆς μενούσης ἀνάγκη καὶ τὸ πᾶν μένειν, συνεχὲς ὂν πρὸς τὴν ἀρχήν.

Cp. also *Met.* 1072 a 21-7, *ad* 5 a 2-4, p. 141 above.

For Aristotle's preoccupation with the idea of an infinite regress, see e.g.

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[1] The subject of ἠρεμεῖν may still be the principles in general, despite the use of the singular in the following motivation of why people do adopt ἠρεμία, the argument that only one can be first being implied there; accordingly there is no "sudden switch from the plural *archais* (7b9) to the singular *to kinoun* (7b16f.)", as RUDOLPH (1988) 234 believes, and thus no reason to refer in this context to Aristotle's argument in *Physics* Θ, 258 b 11 ff., where "Aristotle considers the question of whether there is one first mover or more than one, and he finally decides in favor of the principle's unity", *ibid.* (For Th.' discussion of the question whether a single principle or a plurality of principles is involved, and a corresponding fluctuation between the use of singular and plural, see Ch. I.)

[2] Usener's conjecture κινοῦν εἶναι τὸ κινούμενον is less attractive, since the argument that what is moved cannot be imparting movement always can hardly be advanced as a reason for adopting ἠρεμία instead.

[3] See commentary *ad loc.*

Arist. *Met.* α 994 a 1 ff. ἀλλὰ μὴν ὅτι γ' ἔστιν ἀρχή τις, καὶ οὐκ ἄπειρα τὰ αἴτια τῶν ὄντων οὔτ' εἰς εὐθυωρίαν οὔτε κατ' εἶδος, δῆλον. (This holds for each of the four causes, 17-8:) ὥστ' εἴπερ μηδέν ἐστι πρῶτον, ὅλως αἴτιον οὐδέν ἐστιν.

MA 698 a 7-10 ὅτι μὲν οὖν ἀρχὴ τῶν ἄλλων κινήσεων τὸ αὐτὸ ἑαυτὸ κινοῦν, τούτου δὲ τὸ ἀκίνητον, καὶ ὅτι τὸ πρῶτον κινοῦν ἀναγκαῖον ἀκίνητον εἶναι, διώρισται πρότερον (see *Phys.* 258 a 28 ff., pp. 344-5 below).

Th. questions the validity of this reason because it risks being a merely verbal one (**κίνδυνος** (sc. ἐστι) **μὴ λογῶδες** (sc. εἶναι)). It seems that an argument is called λογώδης if, instead of reflecting a real state of affairs, it is merely based upon implications of the words used; compare the use of the term in Aristoxenus, where a melody is called λογώδης when it follows the prosodic values inherent in the words themselves:

Aristox. *EH* I.18.5 ff. Da Rios τούτων δ' οὕτως ἀφορισμένων τε καὶ προδιῃρημένων περὶ μέλους ἂν εἴη ἡμῖν πειρατέον ὑποτυπῶσαι τί ποτ' ἐστὶν ἡ φύσις αὐτοῦ. ὅτι μὲν οὖν διαστηματικὴν ("proceeding by intervals") ἐν αὐτῷ δεῖ τὴν τῆς φωνῆς κίνησιν εἶναι προείρηται, ὥστε τοῦ γε λογώδους κεχώρισται ταύτῃ τὸ μουσικὸν μέλος· *λέγεται γὰρ δὴ λογῶδές τι μέλος τὸ συγκείμενον ἐκ τῶν προσῳδιῶν τῶν ἐν τοῖς ὀνόμασιν·* φυσικὸν γὰρ τὸ ἐπιτείνειν καὶ ἀνιέναι ἐν τῷ διαλέγεσθαι.

According to Th., then, the reasoning risks 'smelling of words'.[1]

Accordingly λογώδης would seem to be rather more concrete than λογικός; *contra* TRICOT: "λογῶδες est syn. du terme λογικός employé fréquemment par Ar. pour qualifier un raisonnement *abstrait*, purement *dialectique* (διαλεκτικός) et *vide* (κενός), par opposition au raisonnement φυσικός, *réel*, qui est puisé ἐκ τῶν κειμένων, c'est à dire *d'après des principes propres* à une science déterminée et selon leur contenu véritable.", (*ad loc.*; cp. also R-F, REALE).

By his remark Th. probably means to convey that those who attribute ἠρεμία in the sense of a στέρησις κινήσεως to the principles, tend to attach too much importance to the lexical meaning of κίνησις. These people fail to recognize that κίνησις need not invariably involve a disqualification because of its association with the perishable and non-being:[2] it seems that there is no need to assume an ultimate κινοῦν which is ἀκίνητον, since the term κίνησις may also be used in a sense which does *not* have such negative connotations. Th. thus seems to be doing here in the case of κίνησις what he is said to have done in that of παθητικός in

[1] Cp. DEBRUNNER (1917) 195: "Die Hauptmasse der analogischen Beispiele von -ώδης hat als Grundwort ein Substantiv, entsprechend der Entstehung aus 'duftend nach etwas'".

[2] An association which gave rise to the Parmenidean position, and which worried not only Plato but also Aristotle after him: cp. VAN RAALTE (1988) 207.

307D FHS&G (= Prisc. *Metaphr.* 28.15 ff.) "τί τὸ πάθος ἢ ποία μεταβολή; καὶ τὰ μὲν πάθη ἔξωθεν, ὁ δὲ νοῦς ἀρχὴ καὶ ἀφ' ἑαυτοῦ. ὡς οὖν παθητικός. εἰ γὰρ ὅλως ἀπαθής", φησίν, "οὐδὲν νοήσει. ... ἀπαθὲς γὰρ ὁ νοῦς", φησὶν ὁ Θεόφραστος, "*εἰ μὴ ἄρα ἄλλως ᾖ τὸ παθητικόν, οὐχ ὡς τὸ κινητικόν* (ἀτελὴς γὰρ ἡ κίνησις) *ἀλλ' ὡς ἐνέργεια.* ταῦτα δὲ διαφέρει. χρῆσθαι δὲ ἀναγκαῖον ἐνίοτε τοῖς αὐτοῖς ὀνόμασιν. ..."[1]

If the reasoning with respect to παθητικός is adapted to the argument here, Th.' seems to be proposing that, instead of saying that the principles are in a state of ἠρεμία in the sense of ἀκινησία, one might conceive them to be ἄλλως κινούμενα, namely ὡς ἐνέργεια. This would mean that in the present passage (as contrasted with the statement ascribed to him in the testimony quoted above)[2] Th. dissociates the term κίνησις from the property of being invariably ἀτελής. **ἐπεί** (7 b 15) would thus introduce Th.' own motivation of his preference for ἐνέργεια: if one excludes κίνησις from the principles altogether, one risks being unduly influenced by its negative connotations. The reasoning involved in ἐπεί, then, at least suggests that the value Th. places on ἐνέργεια lies in its merely referring to κίνησις of a superior kind. The consequence of all this would seem to be that, as far as Th. is concerned, the condition to be ascribed to the principles *might be called κίνησις* as well as ἐνέργεια.[3]

Cp. RUDOLPH (1988) 235 "In distinguishing *energeia* as worthier and superior, Theophrastus may have taken over this doctrine [sc. as stated in Arist. *Met.* Θ.6] and be sharing the twofold Aristotelian aporia connected with it. For on the one hand *energeia*—understood as a kind of completed *kinêsis*—is itself not absolutely opposed to the domain of the kinetic, that is, of the sensibles, but it is instead connected with it in the sense of a *teleological relation* between uncompleted and completed conditions. But on the other hand, the difference between

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[1] Cp. also 307A.24 ff. FHS&G (= Them. *In De An.* 430 a 10-25).

[2] See also 152 FHS&G, p. 338 n. 1 above.

[3] In this respect Th. seems to diverge significantly from the view of his predecessor—a difference which seems to be undervalued by RUDOLPH when he argues that "Theophrastus' privileging of *energeia* as worthier and preeminent in comparison to *kinêsis accords well with the Aristotelian doctrine of the first mover*: both Theophrastus and Aristotle argue in terms of the faultlessness of *energeia* in comparison to *kinêsis*. *Aristotle does this in contrast to the concept of* dunamis, *Theophrastus in comparison to* kinêsis *or* êremia. Both privilege *energeia* with respect to *kinêsis* in this sense. *Energeia* appears precisely as a special or ideal case of *kinêsis*, a suprasensible *kinêsis*, that is, one that is without pause." (234); italics added. See Arist. *Met.* Θ.6, 1048 b 6-9 λέγεται δὲ ἐνεργείᾳ οὐ πάντα ὁμοίως, ἀλλ' ἢ τῷ ἀνάλογον, ὡς τοῦτο ἐν τούτῳ ἢ πρὸς τοῦτο, τόδ' ἐν τῷδε ἢ πρὸς τόδε· τὰ μὲν γὰρ *ὡς κίνησις πρὸς δύναμιν*, τὰ δ' ὡς οὐσία πρός τινα ὕλην. ἄλλως δὲ καὶ ...

> the *prôta* and the sensibles corresponds to that between *energeia* and *kinesis.*[1] With his initial demand for a *sunaphê*, Theophrastus has basically made this *aporia* his theme, and he thereby establishes a connection with Aristotle's differentiated formulation of the problem, as transmitted in the *Metaphysics* and in the *Physics*' discussion of the concept of *energeia*."

Whether **ἄλλως οὐκ ἀξιόπιστον** is still dependent on κίνδυνος μή or not, it is added with the intention of making clear that the ascription of τὸ ἠρεμεῖν to the principles is not worthy of belief otherwise (i.e., apart from the clearly merely verbal argument that what imparts movement cannot be in movement invariably); rather, this condition of the principles—which may be called ἐνέργεια, κίνησις, or, if one so wishes, even ἠρεμία: see above—requires a more profound explanation.

ἀξιόπιστος ("trustworthy", "reliable") can be said of men (Arist. *Rhet.* 1356 a 5-6 διὰ μὲν οὖν τοῦ ἤθους (sc. persuasion is achieved), ὅταν οὕτω λεχθῇ ὁ λόγος ὥστε ἀξιόπιστον ποιῆσαι τὸν λέγοντα), of things (Plut. *Vit. Caes.* 58, 17 ναύλοχα (ship-stations) πρὸς τοσαύτην ἀξιόπιστα ναυτιλίαν), and of observations or proof:

> Arist. *GA* 741 a 32-8 εἰ δ' ἔστι τι γένος ὃ θῆλυ μέν ἐστιν, ἄρρεν δὲ μὴ ἔχει κεχωρισμένον, ἐνδέχεται τοῦτο ζῷον ἐξ αὐτοῦ γεννᾶν. ὅπερ *ἀξιοπίστως μὲν οὐ συνῶπται* μέχρι γε τοῦ νῦν, ποιεῖ δὲ διστάζειν ⟨ἔνια⟩ ἐν τῷ γένει τῷ τῶν ἰχθύων· τῶν γὰρ καλουμένων ἐρυθρίνων ἄρρην μὲν οὐθεὶς ὦπταί πω, θήλειαι δὲ καὶ κυημάτων πλήρεις. ἀλλὰ τούτων μὲν *οὔπω πεῖραν ἔχομεν ἀξιόπιστον*· ...

As appears from **ἀλλὰ μείζω τινὰ αἰτίαν ζητεῖ**, the reason here for not accepting the assumption of τὸ ἠρεμεῖν <or whatever one may call this condition> in the case of the principles, is that it is not in accordance with the importance of the matter involved (sc., principles): see *ad* σεμνοτέραν καὶ μείζω, 4 a 8-9; cp. *ad* οὔθ' ὅλως ἀξιόχρεα ... τοῦ παντός 4 a 20-1, and τὸ δὲ ... τῆς αἰτίας μείζονα ζητεῖ λόγον 5 a 21-2.

ἀλλὰ μείζω τινὰ αἰτίαν ζητεῖ, then, involves a slight anacoluthon—or rather, it is in a way *ad sensum*, since the question whether ἠρεμία obtains is in fact the matter under discussion—, in that strictly speaking it is an assertion about the condition ascribed to the principles (τὸ ἠρεμεῖν, or whatever) rather

[1] See Arist. *Met.* Θ.6, 1048 b 28-35 τούτων δὴ ⟨δεῖ⟩ τὰς μὲν κινήσεις λέγειν, τὰς δ' ἐνεργείας. πᾶσα γὰρ κίνησις ἀτελής, ἰσχνασία μάθησις βάδισις οἰκοδόμησις· αὗται δὲ κινήσεις, καὶ ἀτελεῖς γε. οὐ γὰρ ἅμα βαδίζει καὶ βεβάδικεν, οὐδ' οἰκοδομεῖ καὶ ᾠκοδόμηκεν, οὐδὲ γίγνεται καὶ γέγονεν, ἢ κινεῖται καὶ κεκίνηται· ἀλλ' ἕτερον [καὶ κινεῖ καὶ κεκίνηκεν]· ἑώρακε δὲ καὶ ὁρᾷ ἅμα τὸ αὐτό, καὶ νοεῖ καὶ νενόηκεν. τὴν μὲν οὖν τοιαύτην ἐνέργειαν λέγω, ἐκείνην δὲ κίνησιν.

than about the proposition τό ... διὰ τοῦτ' ἠρεμεῖν ὡς ... τὸ κινοῦν (which κίνδυνος μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον applies to).

The condition of the principles, then, demands a more substantial or more weighty explanation: αἰτία apparently is used here in the sense of "explanation" as an equivalent of λόγος τῆς αἰτίας (although here, as elsewhere, this specification blurs the fact that the use of αἰτία at the same time suggests that this type of reasoning in favour of ἠρεμία makes one look for a "cause" which itself is better qualified to be an ultimate principle); cp. 5 a 22. As may be surmised on the basis of what follows, to Th. such a 'more weighty explanation' has a reasonable chance of being found in an explanation of the ultimate principle in which mover and moved, active and passive coincide: cp. also *ad* λογῶδες, above.

7 b 19-22 δοκεῖ δὲ ... πάσχειν.

μὴ ἀεὶ Wimmer; μὴ δεῖ PJ; μὴ δὴ CA; καὶ ὡς δεῖ L; μὴ δεῖν L-M ("et ut vid. Isḥāq").
κινεῖ MSS.; κινεῖται USENER (1861) 276.

In addition to (**καί**) the implausibility of ascribing to the principles a privation of movement (7 b 17-9), the evidence of sense perception is adduced as a new point (**δέ**). Sense perception seconds the possibility that in the process of imparting movement the subject and the object involved are not invariably distinct entities (this being another variety of the argument against ἠρεμία as involving privation of movement): see *ad* ὡς ἐνδεχόμενον ... κινεῖ, below. The use of **συναυδᾶν** (cp. Soph. *Aj.* 943, of the chorus expressing agreement) merely extends the metaphor of συμφωνεῖν, ὁμολογεῖν in similar contexts; cp. e.g. *Ign.* 61 σύμφωνον δὲ τούτῳ καὶ τὸ τὰ ἰξούμενα μὴ καίεσθαι;[1] cp. also Arist. *GC* 336 b 15 ff. φαίνεται δὲ καὶ τὰ κατὰ τὴν αἴσθησιν ὁμολογούμενα τοῖς παρ' ἡμῶν λόγοις· ὁρῶμεν γὰρ κ.τ.λ.

In what way sense perception is in agreement with what the preceding argument leads up to, is left unspecified (**τρόπον τινά**: see *ad* 5 a 16); it seems

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[1] "In agreement with these facts is our experience that things smeared with birdlime do not burn", tr. COUTANT.
The other way around, of λόγος agreeing with the facts: *CP* I.17.6 ἐκ δὲ τῶν καθ' ἕκαστα θεωροῦσιν σύμφωνος ὁ λόγος τῶν γιγνομένων ("when we obverve the particular kinds (sc. of plants), our account of what happens is in agreement"). In some cases sense-perception (and experience) do not need to be corroborated by λόγος: *CP* I.22.6 οὐ γὰρ ἔτι ταῦτα λόγου δεῖται πρὸς τὴν πίστιν, ἀλλὰ καὶ ἡ τῶν ἰατρῶν χρεία μαρτυρεῖ καὶ ἡ αἴσθησις.

safe to surmise,[1] however, that Th. is thinking of the observation of animal movement: see 10 a 16 ff., and note *ad loc.*; cp. also Aristotle's argument in *Phys.* 259 a 28 – b 15, below.

Note that the instances quoted above of the metaphorical use of συμφωνεῖν and ὁμολογεῖν (especially *CP* I.22.6, Arist. *GC* 336 b 16), similar to the present use of συναυδᾶν, do not seem to support the alternative interpretation proposed by L-M: "la perception constitue elle-même, dans une certaine mesure, un tel cas d' automotricité, du moins s'il est vrai que le moteur de la perception n'est pas uniquement l'objet extérieur mais, comme Théophraste l'a déjà noté en 5b5-7, une activité psychique." (*ad loc.*). This reference, however, does not seem to be quite appropriate since in 5 b 3 ff. the point is precisely that perception—although the external stimuli are transmitted through media—takes place in soul; accordingly, this conception of αἴσθησις does not justify advancing soul as an example of the phenomenon that agent and patient coincide, as L-M realize themselves: "τρόπον τινά marque alors les limites de l'exemple, puisque, dans le cas de la sensation, le moteur ne se confond pas intégralement avec le mû." (*ad loc.*).

Sense perception, then, somehow corroborates that it is possible (**ὡς ἐνδεχόμενον**) that what imparts movement (**τὸ κινοῦν**) and what is moved by it (**ὃ κινεῖ**) are not always distinct entities.

Wimmer's conjecture (adopted by R-F, TRICOT, REALE) **μὴ ἀεὶ** (... ἕτερον εἶναι) for μὴ δεῖ PJ ("paléographiquement très simple", L-M *ad loc.*) makes excellent sense, and seems to be preferable anyway to the awkwardness involved in subordinating one modal statement to another (differently L-M, who read ἐνδεχόμενον μὴ δεῖν ... ἕτερον εἶναι: "qu'il est possible que le moteur ne doive pas être différent de ce qu'il meut"—apparently in accordance with the Arabic translation).

The use of the phrase ὃ κινεῖ instead of τὸ κινούμενον (cp. USENER' s conjecture ὃ κινεῖται, above) serves to bring out that, in one and the same process of κίνησις, subject and object of movement may coincide.

The idea that what imparts movement and what receives it may coincide, apparently is meant as a reaction against Aristotle's tendency to ascribe κίνησις to an external agent or force—even in the case of animals; see e.g.

Arist. *Phys.* 259 a 28 – b 15 (ἐπεὶ δὲ τὰ μὲν τοιαῦτα δῆλα πᾶσι,) βουλόμεθα δὲ δεῖξαι καὶ τοῖν δυοῖν ἑκατέρου τὴν φύσιν, ὅτι ἔστι τὰ μὲν ἀεὶ ἀκίνητα τὰ δ' ἀεὶ κινούμενα, προϊόντες δ' ἐπὶ τοῦτο καὶ θέντες ἅπαν τὸ κινούμενον ὑπό τινος κινεῖσθαι, καὶ τοῦτ' εἶναι ἢ ἀκίνητον ἢ κινούμενον, *καὶ κινούμενον ἢ ὑφ' αὑτοῦ ἢ ὑπ' ἄλλου ἀεί*, προήλθομεν ἐπὶ τὸ λαβεῖν ὅτι τῶν κινουμένων ἐστὶν ἀρχὴ κινουμένων μὲν ὃ αὐτὸ ἑαυτὸ κινεῖ, πάντων δὲ τὸ ἀκίνητον,

[1] "T. appeals to the apparent facts of the initiation of self-movement by men and animals", R-F *ad loc.*

ὁρῶμεν δὲ καὶ φανερῶς ὄντα τοιαῦτα ἃ κινεῖ αὐτὰ ἑαυτά, οἷον τὸ τῶν ἐμψύχων καὶ τὸ τῶν ζῴων γένος,—ταῦτα δὲ καὶ *δόξαν παρεῖχε μή ποτ' ἐνδέχεται κίνησιν ἐγγίγνεσθαι μὴ οὖσαν ὅλως, διὰ τὸ ἐν τούτοις ὁρᾶν ἡμᾶς τοῦτο συμβαῖνον· ἀκίνητα γάρ ποτε ὄντα κινεῖται πάλιν, ὡς δοκεῖ. τοῦτο δὴ δεῖ λαβεῖν, ὅτι μίαν κίνησιν αὐτὰ κινεῖ, καὶ ὅτι ταύτην οὐ κυρίως*·[1] οὐ γὰρ ἐξ αὐτοῦ τὸ αἴτιον, ἀλλ' ἔνεισιν ἄλλαι κινήσεις φυσικαὶ τοῖς ζῴοις, ἃς οὐ κινοῦνται δι' αὐτῶν, οἷον αὔξησις φθίσις ἀναπνοή, ἃς κινεῖται τῶν ζῴων ἕκαστον ἠρεμοῦν καὶ οὐ κινούμενον τὴν ὑφ' αὐτοῦ κίνησιν· τούτου δ' αἴτιον τὸ περιέχον καὶ πολλὰ τῶν εἰσιόντων, οἷον ἐνίων ἡ τροφή· πεπτομένης μὲν γὰρ καθεύδουσι, διακρινομένης δὲ ἐγείρονται καὶ κινοῦσιν ἑαυτούς, *τῆς πρώτης ἀρχῆς ἔξωθεν οὔσης*. διὸ οὐκ ἀεὶ κινοῦνται συνεχῶς ὑφ' αὐτῶν· ... Cp. 253 a 10 ff.

MA 698 b 18-21 ἀνάγκη δὲ τοῦτο (sc. ἀκίνητόν τι) ἕτερον εἶναι τοῦ κινουμένου, καὶ ὅλον ὅλου, καὶ μόριον μηδὲν εἶναι τοῦ κινουμένου τὸ οὕτως ἀκίνητον· εἰ δὲ μή, οὐ κινηθήσεται. Cp. 699 a 12.

διὰ τὸ ποιεῖν καὶ πάσχειν ("on account of the acting-and-being-acted-upon", i.e. on account of the distinction between agent and patient) states the assumption which is at the basis of the conclusion ἕτερον εἶναι, and thus presents the motivation of the point of view rejected here.

Th. apparently is not referring to the idea that acting and being acted upon involve a reciprocal relation, the agent in its turn being affected by the patient (as would be the case if διὰ τὸ[2] ποιοῦν καὶ πάσχειν is read)[3] but rather to the idea that, by being in the condition of ἐνέργεια, a single entity may be both agent and patient in one and the same process; compare

CP IV.1.3 δεῖ δὲ λαβεῖν πρὸς αὐτὰς (sc. the ἀπορίαι that the weaker seeds produce, and are produced by, the stronger plants) ἀρχὴν τήνδε· τὸ σπέρμα μὴ μόνον ἔχειν δύναμιν τῷ ποιεῖν ἀλλὰ καὶ τῷ πάσχειν, ὥσπερ καὶ κατὰ πάντων τῶν τῆς φύσεως ἀληθές·[4] καὶ κατ' αὐτὴν δὲ τὴν γένεσιν ἀμφοῖν εἶναι τὴν ἐνέργειαν, καὶ τρόπον τινὰ οὐχ ἧττον τῷ πάσχειν, τότε γὰρ καὶ ἡ ἐν τοῖς σπέρμασιν κινεῖται δύναμις οἷον διαθερμαινομένων. διὸ καὶ οὐ πάντα βλαστάνει κατὰ τὴν αὐτὴν αἰτίαν, ἀλλ' ὅταν ἡ αἰτία τοῦ ἀέρος κατάσχῃ κρᾶσις.

IV.3.3 δεῖ ... ἔχειν τινὰ ὑγρότητα (sc. the seed), καὶ οὐχ ἧττον, ἀλλὰ μᾶλλον ἴσως, εὐκρασίαν τὸ εὐβλαστὲς πρὸς τὸ ποιεῖν καὶ πάσχειν.

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[1] "We must grasp the fact, therefore, that animals move themselves only with one kind of motion, and that this is not strictly originated by them", *RevOT*.

[2] τὸ ⟨τὸ⟩ coni. R-F.

[3] "weil das Bewegende, wenn es tätig ist, auch leidet" (to be connected with ὡς ἐνδεχόμενον), USENER (1861) 276, adopted by REALE; cp. also TRICOT, R-F *ad loc.*

[4] "as is also true of all performances of the nature of a plant" tr. EINARSON/LINK. Cp. *CP* II.3.7; see *ad* 4 a 11, p. 90 above.

Prisc. *Metaphr.* 27.27-9 (...) ὅλως οὐ κυρίως ἀλλὰ καθ' ὁμωνυμίαν πάσχει, ἐνεργεῖ δὲ μᾶλλον (sc. ὁ νοῦς). τῇ γὰρ ἑαυτοῦ ἐνεργείᾳ καὶ τὰς ἀπὸ τῶν προτέρων δέχεται τελειότητας καὶ οὐκ ἔξωθεν εἰσδέχεται ἅπερ νοεῖ. (See also the passages quoted in the next note.)

It seems, then, that Th. is denying the necessity of assuming, on the basis of the axiom that the first agent should be unaffected itself—presumably because being affected would destroy its eternity and thus endanger the permanence of the cosmos—, that the first cause of κίνησις is characterized by ἠρεμία (involving ἀκινησία).

One may compare Aristotle's dissociation, in the rather different context of *De generatione et corruptione*, of τὸ κινεῖν and τὸ ποιεῖν, because of the contrast between 'agent' and 'patient'; this dissociation is effected by defining the former as the broader term—so that it *is* posssible for an entity to impart movement without acting at the same time:

Arist. *GC* 323 a 12-22 ἐπεὶ δὲ τὸ κινοῦν οὐχ ὁμοίως κινεῖ τὸ κινούμενον, ἀλλὰ τὸ μὲν ἀνάγκη κινούμενον καὶ αὐτὸ κινεῖν, τὸ δ' ἀκίνητον ὄν, δῆλον ὅτι καὶ ἐπὶ τοῦ ποιοῦντος ἐροῦμεν ὡσαύτως· καὶ γὰρ τὸ κινοῦν ποιεῖν τί φασι καὶ τὸ ποιοῦν κινεῖν. *οὐ μὴν ἀλλὰ διαφέρει γε καὶ δεῖ διορίζειν·—οὐ γὰρ οἷόν τε πᾶν τὸ κινοῦν ποιεῖν, εἴπερ τὸ ποιοῦν ἀντιθήσομεν τῷ πάσχοντι*, τοῦτο δ' οἷς ἡ κίνησις πάθος, πάθος δὲ καθ' ὅσον ἀλλοιοῦται μόνον, οἷον τὸ λευκὸν καὶ τὸ θερμόν· ἀλλὰ *τὸ κινεῖν ἐπὶ πλέον τοῦ ποιεῖν ἐστίν*—ἐκεῖνο δ' οὖν φανερόν, ὅτι ἔστι μὲν ὡς τὰ κινητικὰ τῶν κινητῶν ἅπτοιτ' ἄν, ἔστι δ' ὡς οὔ.

Now, Aristotle's dissociation of κινεῖν from ποιεῖν seems to be connected with the circumstance that, if the entity would be acting too, it would be different from what is acted upon only in species, and not in genus, and this would of course be inappropriate in the relation between principles and 'what comes after the principles':

Arist. *GC* 324 a 3-9 (... ,) ὥστ' ἀνάγκη πῶς μὲν εἶναι ταὐτὰ τό τε ποιοῦν καὶ τὸ πάσχον, πῶς δ' ἕτερα καὶ ἀνόμοια ἀλλήλοις. ἐπεὶ δὲ καὶ *τὸ πάσχον καὶ τὸ ποιοῦν τῶν μὲν γένει ταὐτὰ καὶ ὅμοια τῷ δ' εἴδει ἀνόμοια*, τοιαῦτα δὲ τἀναντία, φανερὸν ὅτι παθητικὰ καὶ ποιητικὰ ἀλλήλων ἐστὶ τά τ' ἐναντία καὶ τὰ μεταξύ· καὶ γὰρ ὅλως φθορὰ καὶ γένεσις ἐν τούτοις.

Similarly Aristotle distinguishes an agent "whose form does not consist of matter" in order to explain that, after all, there *may* be an agent which is not patient at the same time:

ibid. 324 a 24 – b 6 τὸν αὐτὸν δὲ λόγον ὑποληπτέον εἶναι περὶ τοῦ ποιεῖν καὶ πάσχειν ὅνπερ καὶ περὶ τοῦ κινεῖν καὶ κινεῖσθαι. διχῶς γὰρ λέγεται καὶ τὸ κινοῦν· ἐν ᾧ τε γὰρ ἡ ἀρχὴ τῆς κινήσεως, δοκεῖ τοῦτο κινεῖν (ἡ γὰρ ἀρχὴ πρώτη τῶν αἰτιῶν), καὶ πάλιν τὸ ἔσχατον πρὸς τὸ κινούμενον καὶ τὴν γένεσιν. ὁμοίως δὲ καὶ περὶ τοῦ ποιοῦντος· καὶ γὰρ τὸν ἰατρόν φαμεν ὑγιάζειν

καὶ τὸν οἶνον. τὸ μὲν οὖν πρῶτον κινοῦν οὐδὲν κωλύει ἐν μὲν κινήσει ἀκίνητον εἶναι (ἐπ' ἐνίων δὲ καὶ ἀναγκαῖον), τὸ δ' ἔσχατον ἀεὶ κινεῖ κινούμενον, ἐπὶ δὲ ποιήσεως τὸ μὲν πρῶτον ἀπαθές, τὸ δ' ἔσχατον καὶ αὐτὸ πάσχον· ὅσα γὰρ μὴ ἔχει τὴν αὐτὴν ὕλην, ποεῖ ἀπαθῆ ὄντα (οἷον ἡ ἰατρική, αὐτὴ γὰρ ποιοῦσα ὑγίειαν οὐδὲν πάσχει ὑπὸ τοῦ ὑγιαζομένου), τὸ δὲ σιτίον ποιοῦν καὶ αὐτὸ πάσχει τι· ἢ γὰρ θερμαίνεται ἢ ψύχεται ἢ ἄλλο τι πάσχει ἅμα ποιοῦν. ἔστι δὲ ἡ μὲν ἰατρικὴ ὡς ἀρχή, τὸ δὲ σιτίον τὸ ἔσχατον καὶ ἁπτόμενον.

ὅσα μὲν οὖν μὴ ἐν ὕλῃ ἔχει τὴν μορφήν, ταῦτα μὲν ἀπαθῆ τῶν ποιητικῶν, ὅσα δ' ἐν ὕλῃ, παθητικά (κ.τ.λ.).

Accordingly, for Aristotle there is reason to assume an unaffected agent as well as an unmoved mover:

ibid. 324 b 10-3 καὶ ὥσπερ ἐπὶ κινήσεως, τὸν αὐτὸν ἔχει τρόπον καὶ ἐπὶ τῶν ποιητικῶν· ἐκεῖ τε γὰρ τὸ πρώτως κινοῦν ἀκίνητον, καὶ ἐπὶ τῶν ποιητικῶν τὸ πρῶτον ποιοῦν ἀπαθές.

To conclude, in the present context Th. seems to be arguing that in the case of the principles it is unnecessary to postulate ἠρεμία in order to keep them from being involved in an agent-patient relationship which would be foreign to the nature of a principle. The reason is not—as for Aristotle it is—that there is a kind of κίνησις not involving πάσχειν (either because this particular kind of κίνησις does not involve ποιεῖν, or because in this case ποιεῖν does not involve πάσχειν),[1] but that in the case of ἐνέργεια the agent and patient may simply be coincident, πάσχειν being devoid of any negative connotations.

Cp. also 307D.5-6 FHS&G εἰ μὴ ἄρα ἄλλως ᾖ τὸ παθητικόν, οὐχ ὡς τὸ κινητικόν (ἀτελὴς γὰρ ἡ κίνησις) ἀλλ' ὡς ἐνέργεια, p. 341 above.

7 b 22-3 ἔτι δ' ... τὸν θεόν.

ἔτι δέ[2] adds a further (the fourth and final) argument in favour of ascribing ἐνέργεια rather than ἠρεμία to the principles: the reasoning which results in adopting ἠρεμία (1) riks being a merely verbal one, (2) is not worthy of belief otherwise, (3) is shown by sense perception to be an unnecessary complication, and, (4) <does not hold, convince> when applied to mind itself and to God.

For the use of **ἄγειν ἐπί** τι in the sense of taking (people—or, in this case, the question itself) to an example or test-case, cp. Plato *Phaedo* 73 B 1

[1] This idea of κίνησις-without-τὸ πάσχειν does not, of course, stop Aristotle from ultimately denying κίνησις to the principle too.

[2] Cp. 7 a 4; see *ad* 10 b 7, pp. 498-9 below.

ἔπειτα ἐάν τις ἐπὶ τὰ διαγράμματα ἄγῃ ἢ ἄλλο τι τῶν τοιούτων, ἐνταῦθα σαφέστατα κατηγορεῖ ὅτι τοῦτο οὕτως ἔχει.[1]

In view of the context the point made—or rather alluded to—here apparently is that in the case of νοῦς itself[2] too agent and patient coincide, and probably also that this condition may be referred to as ἐνέργεια; at the same time the suggestion is that, if thus conceived of, νοῦς and God are coincident. The same point seems to be made by Aristotle in *Metaphysics* XII:

Arist. *Met.* 1072 b 19-30 αὑτὸν δὲ νοεῖ ὁ νοῦς κατὰ μετάληψιν τοῦ νοητοῦ· νοητὸς γὰρ γίγνεται θιγγάνων καὶ νοῶν, ὥστε *ταὐτὸν νοῦς καὶ νοητόν*. τὸ γὰρ δεκτικὸν τοῦ νοητοῦ καὶ τῆς οὐσίας νοῦς, ἐνεργεῖ δὲ ἔχων· ὥστε ἐκείνου μᾶλλον τοῦτο ὃ δοκεῖ ὁ νοῦς θεῖον ἔχειν, καὶ ἡ θεωρία τὸ ἥδιστον καὶ ἄριστον. ... καὶ ζωὴ δέ γε ὑπάρχει (sc. τῷ θεῷ)· ἡ γὰρ νοῦ ἐνέργεια ζωή, ἐκεῖνος δὲ ἡ ἐνέργεια· ἐνέργεια δὲ ἡ καθ' αὑτὴν ἐκείνου ζωὴ ἀρίστη καὶ ἀΐδιος. φαμὲν δὴ τὸν θεὸν εἶναι ζῷον ἀΐδιον ἄριστον, ὥστε ζωὴ καὶ αἰὼν συνεχὴς καὶ ἀΐδιος ὑπάρχει τῷ θεῷ· τοῦτο γὰρ ὁ θεός.

—although here too Aristotle seems not to have accepted the consequence that some sort of κίνησις, or πάσχειν[3] for that matter, is involved:

Arist. *Met* 1074 b 25-7 δῆλον τοίνυν ὅτι τὸ θειότατον καὶ τιμιώτατον νοεῖ, καὶ οὐ μεταβάλλει· εἰς χεῖρον γὰρ ἡ μεταβολή, καὶ κίνησίς τις ἤδη τὸ τοιοῦτον.

DA 407 a 32-3 ἔτι δ' ἡ νόησις ἔοικεν ἠρεμήσει τινὶ καὶ ἐπιστάσει μᾶλλον ἢ κινήσει· ...

408 b 29-31 ὁ δὲ νοῦς ἴσως θειότερόν τι καὶ ἀπαθές ἐστιν. ὅτι μὲν οὖν οὐχ οἷόν τε κινεῖσθαι τὴν ψυχὴν φανερὸν ἐκ τούτων· εἰ δ' ὅλως μὴ κινεῖται, δῆλον ὡς οὐδ' ὑφ' ἑαυτῆς.

430 a 10-9 ἐπεὶ δ' ὥσπερ ἐν ἁπάσῃ τῇ φύσει ἐστί τι τὸ μὲν ὕλη ἑκάστῳ γένει (τοῦτο δὲ ὃ πάντα δυνάμει ἐκεῖνα), ἕτερον δὲ τὸ αἴτιον καὶ ποιητικόν, τῷ ποιεῖν πάντα, οἷον ἡ τέχνη πρὸς τὴν ὕλην πέπονθεν, ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπάρχειν ταύτας τὰς διαφοράς. καὶ ἔστιν ὁ μὲν τοιοῦτος νοῦς τῷ πάντα γίγνεσθαι, ὁ δὲ τῷ πάντα ποιεῖν, ὡς ἕξις τις, οἷον τὸ φῶς· τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὄντα χρώματα ἐνεργείᾳ

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[1] "if you confront people with anything in the nature of a diagram, you have the plainest proof of the point in question", tr. HACKFORTH.

[2] For αὑτὸν ... τὸν ... see *ad* 4 b 4, p. 116 above.

[3] With some qualification however Arist. *DA* 417 b 2-7 οὐκ ἔστι δ' ἁπλοῦν οὐδὲ τὸ πάσχειν, ἀλλὰ τὸ μὲν φθορά τις ὑπὸ τοῦ ἐναντίου, τὸ δὲ σωτηρία μᾶλλον τοῦ δυνάμει ὄντος ὑπὸ τοῦ ἐντελεχείᾳ ὄντος καὶ ὁμοίου, οὕτως ὡς δύναμις ἔχει πρὸς ἐντελέχειαν· θεωροῦν γὰρ γίγνεται τὸ ἔχον τὴν ἐπιστήμην, ὅπερ ἢ οὐκ ἔστιν ἀλλοιοῦσθαι (εἰς αὑτὸ γὰρ ἡ ἐπίδοσις καὶ εἰς ἐντελέχειαν) ἢ ἕτερον γένος ἀλλοιώσεως., on which see SKEMP (1979) 234 n.13: "Along with this conception of ἐντελέχεια, which was to persist in [Aristotle's] thought, goes the view of thought as not a motion but rather a state of rest, a view found [i]n the *Posterior Analytics* and going back through Plato *Timaeus* 44b (settlement of the soul circles after the twisting perturbations of infancy) and *Phaedo* 96b to Alcmaeon.".

χρώματα. καὶ οὗτος ὁ νοῦς χωριστὸς καὶ ἀπαθὴς καὶ ἀμιγὴς τῇ οὐσίᾳ ὢν ἐνεργείᾳ. ἀεὶ γὰρ τιμιώτερον τὸ ποιοῦν τοῦ πάσχοντος καὶ ἡ ἀρχὴ τῆς ὕλης.

Th.' own position, then, seems to be that there is no reason for assuming that νοῦς (or, θεός), which is characterized by ἐνέργεια, is either without κίνησις or ἀπαθής, since ἐνέργεια involves a superior kind of κίνησις and a kind of agent-patient relationship that does not disqualify the entity involved or endanger its permanence. Compare

Prisc. *Metaphr.* 28.6-9 ὁ νοῦς ἀφ' ἑαυτοῦ τε ἐνεργεῖ καὶ τὴν ἀπὸ τῶν νοητῶν τελείωσιν οὐ παθητικῶς ἀλλ' ἐνεργητικῶς δέχεται· εἰ καὶ δέχεσθαι δέοι φάναι ἀλλὰ μὴ προάγειν· ἀφ' ἑαυτοῦ γὰρ ἀρχόμενος τελειοῦται.
(Also 27.27-9, p. 346 above.)

It should be noted that the association of God with mind does not imply an identification of the two, if one may believe Velleius' well-known criticism of Th.' generosity in using this designation, in

Cic. *ND* I.13.35 (252A FHS&G) nec vero Theophrasti inconstantia ferenda est; modo enim menti divinum tribuit principatum, modo caelo, tum autem signis sideribusque caelestibus.

Actually Th. seems to have regarded as 'God' (or, 'divine') anything which, in various respects, the organization of the constituents of the cosmos depends on; compare

254A FHS&G (= Schol. in Basil. *Homil. in Hexaem.* 1.3) "οἱ μὲν συνυπάρχειν ἐξ ἀιδίου τῷ θεῷ τὸν οὐρανὸν ἀπεφήναντο"· Ἀριστοτέλους ἡ δόξα. "οἱ δὲ αὐτὸν εἶναι θεὸν ἄναρχόν τε καὶ ἀτελεύτητον καὶ *τῆς τῶν κατὰ μέρος οἰκονομίας αἴτιον*"· λέγουσι τὸν Θεόφραστον ἐπὶ ταύτης γενέσθαι τῆς γνώμης.

V.2 (7 b 23 – 8 a 7): *If, as we have argued, the heavenly bodies do not actually imitate the rest of the first principle, there is no guarantee that the lower levels of being imitate the rotation of the heavenly bodies either—so that the cyclical return of natural phenomena too is at risk. A solution would be not to reduce things to a principle without parts, but to conceive of the cosmos as a differentiated organic whole, with a maximum of harmony and in itself complete.*

7 b 23 – 8 a 2 ἄτοπον δὲ ... ἢ τῶν ἄλλων ...·

μιμοῦνται MSS.; κινοῦνται USENER (1890).
εἰ γὰρ PJCA Isḥāq; ἢ γὰρ J²L; ᾖ γάρ BIGNONE (1931) 113; τί γὰρ USENER (1890).
αὐτοῖς MSS.; ἂν τοῖς USENER (1890); ἀκινήτοις van Winden (personal communication).
οὐ συνακολουθεῖ ἡ Ross (R-F *app. crit.*); οὖσιν ἀκολουθεῖ ἡ P; οὖσιν ἀκολουθείη JCLA; οὖσιν ἀκολουθοίη SYLBURG (1585) 257.

The text of this passage is distressingly corrupt, a fact that probably is not unconnected with the complexity of the reasoning.

Another (**καί**) curious point with respect to the concept of ἠρεμία in the case of the principles (for **ἄτοπον**, see *ad* 5 a 18, pp. 172-3 above) concerns, not the condition of ἠρεμία of the principles itself, but the behaviour of the entities on the next lower level. This has already been commented upon in the discussion of cosmic desire in Ch. II, 5 a 23-5 ἄπορον δὲ καὶ πῶς ποτε φυσικὴν ὄρεξιν ἐχόντων οὐ τὴν ἠρεμίαν διώκουσιν ἀλλὰ τὴν κίνησιν, which is summarized h.l. in ὡς οὐ μιμοῦνται τὰ ὀρεγόμενα τοῦ ἠρεμοῦντος. **τὸ ἕτερον λεχθέν**, therefore, obviously refers to the earlier passage.[1]

As has been argued *ad* 5 a 25-8, as far as Th. is concerned imitation and desire are related concepts, although the (Platonic) idea of the visible world as an imitation of the noetic model[2] is distinct from the Aristotelian concept of a desire for rest on the part of the heavenly bodies. As in οὐ τὴν ἠρεμίαν διώκουσιν ἀλλὰ τὴν κίνησιν (5 a 24-5), the point at issue here apparently is not the abortive nature of the imitation, but the fact that the heavenly bodies (the obvious referent of **τὰ ὀρεγόμενα τοῦ ἠρεμοῦντος**) actually do not, in

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[1] Cp. 11 b 14-5 τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολάς, and commentary *ad loc.*; also *CP* I.22.1, quoted *ad* ὁ πρῶτος λόγος, 7 b 9-10, p. 331 above. *Contra* L-M "Etrange également est l'autre déclaration, selon laquelle ..." and R-F "Strange too is the other thing that has been maintained—...".

[2] See especially the passages from Plato's *Timaeus* quoted p. 187 above.

spite of their supposed desire for rest, imitate it (**οὐ μιμοῦνται** (sc. τὴν ἠρεμίαν)), but rather pursue rotation: see *ad* 5 a 23-5.

USENER's conjecture κινοῦνται (1890) is certainly attractive, especially in combination with ἀκινήτοις οὖσιν (van Winden: see above). In that case, the point criticized might simply be that the alleged desire of the heavenly bodies would result in a situation of rest, and that through a similar desire the sublunary entities would be in rest too; the theory discussed, while not explaining the movement one actually observes, would lead one to expect the universe to be a single motionless, undisturbed entity. The 'solution' presented in the sequel would then consist in conceiving the cosmos not as a monolithic entity but as a differentiated whole, with the result that the 'desire' involved could lead to a manifestation of the condition desired for which is adapted to the possibilities of the level involved.

The problem, however, is not only (1) that this difficulty has not been discussed in the preceding, although τὸ ἕτερον λεχθέν certainly suggests that; and (2) that the alleged difficulty actually conflicts with the presentation and discussion of the idea of a desire of the heavenly bodies both in I.5 (τοιαύτη δ' ἡ τοῦ ὀρεκτοῦ φύσις, ἀφ' ἧς ἡ κυκλικὴ ἡ συνεχὴς καὶ ἄπαυστος, 5 a 2-4), and in Chapter II (esp. οὐ τὴν ἠρεμίαν διώκουσιν ἀλλὰ τὴν κίνησιν 5 a 24-5); also, as to the apparent *absence* of the alleged desire for rest in the case of the sublunary entities, II.4. But, what is more, (3) it is hard to see how *any* explanation of the cosmos (τὸ ἕτερον λεχθέν in the sense of 'what is argued too <by some other proponent of a desire for an object characterized by rest>') could reasonably propound this view, since after all even metaphysical explanation is explanation of the changing world (preferably by reducing it to a changeless principle, it must be admitted).

I therefore believe that this possibility (and, as a consequence, the conjecture κινοῦνται) should be rejected, which leaves us—apart from the textcritical problems indicated above—with the problem of the connection between this sentence and what follows (πλὴν ἴσως κ.τ.λ.: see next note).

It seems likely, then, that the specific relevance here of the 'observation' that the heavenly bodies, in spite of their alleged desire for rest, in fact do not imitate it (**γάρ**), lies in the risk that would be involved if (this would mean that) the lower levels do not, in their turn, imitate (the κυκλοφορία of) the heavenly bodies. It should be noted that Aristotle actually *does* express the relation between *these* levels of being in terms of μίμησις (by the elements in particular), and this may be precisely why Th. feels justified to use this term in the context of the desire ascribed to the heavenly bodies. See e.g.

Arist. *Met.* 1050 b 28 μιμεῖται δὲ τὰ ἄφθαρτα καὶ τὰ ἐν μεταβολῇ ὄντα, οἷον γῆ καὶ πῦρ. καὶ γὰρ ταῦτα ἀεὶ ἐνεργεῖ· καθ' αὑτὰ γὰρ καὶ ἐν αὑτοῖς ἔχει τὴν κίνησιν.

Meteor. 346 b 35 – 347 a 8 γίγνεται δὲ κύκλος οὗτος μιμούμενος τὸν τοῦ ἡλίου κύκλον· ἅμα γὰρ ἐκεῖνος εἰς τὰ πλάγια μεταβάλλει καὶ οὗτος ἄνω

καὶ κάτω. καὶ δεῖ νοῆσαι τοῦτον ὥσπερ ποταμὸν ῥέοντα κύκλῳ ἄνω καὶ κάτω, κοινὸν ἀέρος καὶ ὕδατος· πλησίον γὰρ ὄντος τοῦ ἡλίου ὁ τῆς ἀτμίδος ἄνω ῥεῖ ποταμός, ἀφισταμένου δὲ ὁ τοῦ ὕδατος κάτω. καὶ τοῦτ' ἐνδελεχὲς ἐθέλει γίγνεσθαι κατά γε τὴν τάξιν· ὥστ' εἴπερ ᾐνίττοντο τὸν ὠκεανὸν οἱ πρότερον, τάχ' ἂν τοῦτον τὸν ποταμὸν λέγοιεν τὸν κύκλῳ ῥέοντα περὶ τὴν γῆν.

Th.' question thus seems to be: what if the lower levels of being would behave just like the heavenly bodies and the desire of the other, sublunary entities (**ἡ τῶν ἄλλων**, sc. ὄρεξις) in fact would not follow the heavenly bodies (**αὐτοῖς**, i.e., τοῖς ὀρεγομένοις τοῦ ἠρεμοῦντος)[1] in their rotation? The idea of this anacolouthon seems to be either (a) that this explanation would ultimately endanger the cyclical return of the seasons and thus the cycli of generation, with the result that any orderliness there may be in the sublunary world would in its turn be endangered; or rather (b) that this explanation would leave the degree of orderliness which is actually observed in nature unaccounted for.

In any case, (οὐ) **συνακολουθεῖ** apparently corresponds to (οὐ) μιμοῦνται in the previous sentence:[2] for the use of both verbs in one and the same context, compare

Plato *Polit.* 273 E 11 – 274 A 3 καὶ τἆλλά τε πάντα μετέβαλλε, ἀπομιμούμενα καὶ συνακολουθοῦντα τῷ τοῦ παντὸς παθήματι, καὶ δὴ καὶ τὸ τῆς κυήσεως καὶ γεννήσεως καὶ τροφῆς μίμημα συνείπετο τοῖς πᾶσιν ὑπ' ἀνάγκης· ...

In a more physical context the verb is used for the response to external influences, in e.g.

HP VII.2.9 καὶ γὰρ ὁ σίκυος καὶ ἡ κολοκύντη καὶ ἡ σικύα καὶ διὰ τὴν ὥραν καὶ ἴσως ἔτι μᾶλλον διὰ τὴν φύσιν, ἥπερ συνηκολούθηκε τῇ ὥρᾳ.

CP VI.6.8 ὁποία γὰρ ἂν τις αὐτὴ (sc. ἡ κρᾶσις) τυγχάνῃ, αἱ μεταβολαὶ συνακολουθήσουσιν κατὰ λόγον· ...

The indicative mood, which has the effect of presenting a consequence of the conception mentioned before as an actual situation, reinforces the minatory effect of the single protasis. **οὐ** *in protasi* seems to indicate that the negation is closely connected with the verb,[3] in this case perhaps all the more easily so because of the correspondence with οὐ μιμοῦνται: the risk this theory has to

[1] For the unlikelihood of R-F's interpretation of αὐτοῖς ("for those thinkers"), see L-M *ad loc.*

[2] This by itself makes it unlikely, I think, that ἡ (τῶν ἄλλων) μίμησις is the subject of συνακολουθεῖ, as L-M believe, who accordingly propose the following interpretation: "pourquoi l'imitation, qui—d'un point de vue platonicien—accompagne les autres formes de désir, est-elle refusée aux choses qui désirent le moteur immobile?" (*ad loc.*).

[3] See e.g. GOODWIN ([2]1889) § 384.

face is that the sublunary phenomena, just like the heavenly bodies with their alleged desire, in fact do not follow, i.e., 'are irresponsive to' the cyclical movement of the heavens.

8 a 3-7 πλὴν ἴσως ... τελεώτατον.

With **πλὴν ἴσως** Th. apparently introduces a possible way of evading the problem just pointed out (i.e. that the sublunary phenomena would not derive some regularity from the rotation of the heavenly bodies: see preceding note).

The object implied by **οὐχ ὁμοίως ληπτέον** apparently is "all things" generally: perhaps one should not conceive of all things alike,[1] that is, as tending in one and the same direction, this being explicitly added in **ὡς εἰς τὸ ἀμερὲς ἄγοντας**: "by leading them towards the partless (sc. as a goal)". For the characterization of the Aristotelian first mover in terms of τὸ ἀμερές, see Arist. *Phys.* 267 b 25-6 (φανερὸν τοίνυν ὅτι ἀδιαίρετόν ἐστι καὶ ἀμερὲς καὶ οὐδὲν ἔχον μέγεθος sc. τὸ πρῶτον κινοῦν καὶ ἀκίνητον) and *Met.* XII, 1073 a 5-7 δέδεικται δὲ καὶ ὅτι μέγεθος οὐδὲν ἔχειν ἐνδέχεται ταύτην τὴν οὐσίαν ἀλλ' ἀμερὴς καὶ ἀδιαίρετός ἐστιν (κινεῖ γὰρ τὸν ἄπειρον χρόνον, οὐδὲν δ' ἔχει δύναμιν ἄπειρον πεπερασμένον· ...).[2] For the accusative plural of the participle with the verbal adjective cp. *CP* I.10.7 διαιρετέον αὐτὸ τοῦτο πρῶτον ἴσως εἰπόντας ποῖα θερμὰ καὶ ποῖα ψυχρά.

ἀλλ(ά) introduces the alternative: instead of conceiving of all things as tending towards a goal that is characterized by absence of differentiation, one should perhaps, in order to evade the difficulty just mentioned, see to it that the whole cosmos is in maximal harmony with itself and perfect, like any other composite entity. **ὅπως** seems to be occasioned by the modal force of ληπτέον: a verb is lacking in the manuscripts, but may be provided by Usener's reading ᾖ instead of ἤ in 8 a 6; if ᾖ is read, its position may be explained by the emphatic postponement of the subject **ὁ ὅλος οὐρανός**.[3] This postponement seems also to explain the neuter in **σύμφωνον** and **ἀπηρτισμένον** ("complete(d)", "perfect" in the sense that no part is lacking:[4] cp. Arist. Fr. 282 Rose φασὶ δὲ καὶ τὸ ἔμβρυον ἀπαρτίζεσθαι πρὸς ἀκρίβειαν μηνὶ τῷ ἕκτῳ), which for the moment leaves unspecified the precise nature of

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[1] For the idea, cp. 6 a 3-4 ἀξιοῖ ... ἅπανθ' ὅμοια, 8 b 1 οὐδὲ πάντα ὅμοια.

[2] See also *ad* 5 a 8-10.

[3] For the use of ὁ οὐρανός to refer to the cosmos as a whole, see *ad* 5 b 20, p. 231 above. *Contra* L-M who, supposing the present passage to involve an allusion to Plato *Tim.* 92 C 8 (see below), assume that in the present context ὁ ὅλος οὐρανός has a more limited reference ("le ciel dans sa totalité").

[4] αἱ ἀπηρτισμένα καὶ τέλεια λέγουσαι, *Etym. Magn.* s.v. ἀρτιέπειαι.

the comprehensive whole meant. The expression σύμφωνον **ἑαυτῷ** of course by itself presupposes partition; compare

> Ps.-Arist. *Virt.* 1251 b 26-30 καθόλου δὲ τῆς μὲν ἀρετῆς ἐστι τὸ ποιεῖν σπουδαίαν τὴν διάθεσιν περὶ τὴν ψυχήν, ἠρεμαίαις καὶ τεταγμέναις κινήσεσι χρωμένην καὶ *συμφωνοῦσαν κατὰ πάντα τὰ μέρη*· διὸ καὶ δοκεῖ παράδειγμα πολιτείας ἀγαθῆς εἶναι ψυχῆς σπουδαίας διάθεσις.

For the metaphor, see *ad* τὸ σύμφωνον, 5 a 20; for its use in a cosmological context, see

> Ps.-Arist. *De Mundo* 396 b 7-11 ἴσως δὲ καὶ τῶν ἐναντίων ἡ φύσις γλίχεται καὶ ἐκ τούτων ἀποτελεῖ τὸ σύμφωνον, οὐκ ἐκ τῶν ὁμοίων, ὥσπερ ἀμέλει τὸ ἄρρεν συνήγαγε πρὸς τὸ θηλὺ καὶ οὐχ ἑκάτερον πρὸς τὸ ὁμόφυλον, καὶ τὴν πρώτην ὁμόνοιαν διὰ τῶν ἐναντίων συνῆψεν, οὐ διὰ τῶν ὁμοίων.
> —where subsequently Heraclitus' συνάψιες ὅλα καὶ οὐχ ὅλα, συμφερόμενον διαφερόμενον, συνᾷδον διᾷδον, καὶ ἐκ πάντων ἓν καὶ ἐξ ἑνὸς πάντα (Heracl. B 10, 153.10-2 DK) is adduced as an example of this view: see p. 378 below.

Cp. also κόσμω σύνταξιν καὶ ἁρμονίαν, Diotogenes *ap.* Stob. IV.265.10, below; εὐαρμοστία τις καὶ τῶν πολλῶν ὁμοφωνία μετὰ πειθοῦς συνᾳδοίσας, Ecphantus *ap.* Stob. 276.1 f., below.

The metaphor, then, implies that there are non-homogeneous constituent parts contributing to the whole; the addition of **ὅτι μάλιστα** (matching the modal force in ληπτέον ... ὅπως: see above) shows Th. to be aware, it seems, of the capriciousness of nature which makes it difficult to identify the factors that influence the mode of being in the case of each and every constituent part of the cosmic whole.[1]

The idea apparently is that the regularity actually observed in nature *may* be guaranteed (or, *would* be explained) if—instead of assuming all things to be directed towards a single partless, unmoved goal—one would assume the cosmos to be a composite entity, perfect though it may be. This possible way of evading the problem pointed out before amounts to dropping the idea of a tendency towards an ultimate principle which is partless and thus unaffected by other entities, in favour of the idea of the perfection of a harmonious whole, that is to say, of an entity which (like a city, or an animal) essentially

[1] Cp. Th.' rather physical (or, 'dynamic') conception of τὸ σύμφωνον as a phenomenon in the sphere of a συμπάθεια or συμμετρία between meteorological phenomena and vegetative organisms, *CP* I.13.4 f.: οὐ μὴν οὔτε πρὸς τὰς βλαστήσεις ἐναντία ταῦτ' ἐστὶν *οὔτε αὖ ἀσύμφωνα κατὰ τὰς δυνάμεις, ἀλλ' ἔχοντά τινα ὁμοιότητα.* δεῖ γὰρ δὴ τὴν ὥραν ὑγρότητά τινα καὶ θερμότητα ἔχειν, ὥσπερ καὶ τὸ ἔαρ.

involves differentiation and *having* parts (ὡς ἂν ... **τῶν μεριστῶν**). For the use of **ὡς ἂν** introducing a comparison by way of illustration, see e.g.

Lap. 38 τὸ γὰρ κουράλιον, καὶ γὰρ τοῦθ' ὥσπερ λίθος, τῇ χρόᾳ μὲν ἐρυθρόν, περιφερὲς δ' ὡς ἂν ῥίζα· φύεται δ' ἐν θαλάττῃ. ("Incidentally, the coral, which is just like a stone, is red in colour and rounded like a root, and grows in the sea.", tr. EICHHOLZ).

HP III.13.2 μέρος δ' αὐτοῦ (sc. of the bark) τι τὸν αὐτὸν τρόπον ἀφαιρεῖται κατὰ πάχος σχιζόμενον λεπτὸν ὡς ἂν φύλλον ("thin as a leaf").

III.17.5 ῥίζας δὲ ἔχει παχείας ὡς ἂν συκῆς ἡμέρου ("like those of the cultivated fig") καὶ γλισχράς.

The comparison of the cosmos to a **πόλις** seems to be suggestive especially of differentiation, of the cooperation of individual entities towards the whole (see also *ad* κοινωνία, 4 a 10), and thus belongs to the sphere of τὸ σύμφωνον in particular; that to a **ζῷον** is suggestive especially of the more far-reaching concept of a whole, which involves continuity and completeness and thus could be said to be not only σύμφωνον but ἀπηρτισμένον as well. This double comparison as it were provides a provisional answer to the question πότερα μέρη ... ἢ οὐ μέρη τοῦ οὐράνου (5 b 19-20, posed with respect to the lower entities in particular), but not to the further question πῶς μέρη (5 b 21).

For the characterization of πόλις and ζῷον as a composite diversified whole, compare

Arist. *Pol.* 1277 a 5-12 ἔτι ἐπεὶ ἐξ ἀνομοίων ἡ πόλις—ὥσπερ ζῷον εὐθὺς ἐκ ψυχῆς καὶ σώματος, καὶ ψυχὴ ἐκ λόγου καὶ ὀρέξεως, καὶ οἰκία ἐξ ἀνδρὸς καὶ γυναικὸς καὶ κτῆσις ἐκ δεσπότου καὶ δούλου, τὸν αὐτὸν τρόπον καὶ πόλις ἐξ ἁπάντων τε τούτων καὶ πρὸς τούτοις ἐξ ἄλλων ἀνομοίων συνέστηκεν εἰδῶν—, ἀνάγκη μὴ μίαν εἶναι τὴν τῶν πολιτῶν πάντων ἀρετήν, ὥσπερ οὐδὲ τῶν χορευτῶν κορυφαίου καὶ παραστάτου.

In the well-known analogy of πόλις and ζῷον in *De motu animalium* the issue is that the functioning of the whole requires a single[1] central organ:

Arist. *MA* 703 a 29 – b 2 ὑποληπτέον δὲ συνεστάναι τὸ ζῷον ὥσπερ πόλιν εὐνομουμένην. ἔν τε γὰρ τῇ πόλει ὅταν ἅπαξ στῇ ἡ τάξις οὐδὲν δεῖ κεχωρισμένου μονάρχου, ὃν δεῖ παρεῖναι παρ' ἕκαστον τῶν γινομένων, ἀλλ' αὐτὸς ἕκαστος ποιεῖ τὰ αὑτοῦ ὡς τέτακται καὶ γίνεται τόδε μετὰ τόδε διὰ τὸ

[1] Cp. NUSSBAUM (1978) 153 f.: "If Aristotle makes a blunder here, it is not in connecting proper functioning of the entire creature with the states of some bodily organ—for one may even now be a hylomorphist without denying that the higher creatures require a central nervous system or its functional analogue—it is in inferring from functional unity to the *singleness* of the relevant organ and assuming without argument that all systems and processes depend in similar ways on the same center."

ἔθος· ἔν τε τοῖς ζῴοις τὸ αὐτὸ τοῦτο διὰ τὴν φύσιν γίνεται καὶ τῷ πεφυκέναι ἕκαστον οὕτω συστάντων ποιεῖν τὸ αὐτοῦ ἔργον, ὥστε μηδὲν δεῖν ἐν ἑκάστῳ εἶναι ψυχήν, ἀλλ' ἔν τινι ἀρχῇ τοῦ σώματος οὔσης τἆλλα ζῆν μὲν τῷ προσπεφυκέναι, ποιεῖν δὲ τὸ ἔργον τὸ αὐτῶν διὰ τὴν φύσιν.

Cp. also the image of the heart as the citadel of the body:

PA 670 a 23-7 καρδία μὲν οὖν καὶ ἧπαρ πᾶσιν ἀναγκαῖα τοῖς ζῴοις, ἡ μὲν διὰ τὴν τῆς θερμότητος ἀρχήν (δεῖ γὰρ εἶναί τινα οἷον ἑστίαν, ἐν ᾗ κείσεται τῆς φύσεως τὸ ζωπυροῦν, καὶ τοῦτο εὐφύλακτον, ὥσπερ ἀκρόπολις οὖσα τοῦ σώματος), τὸ δ' ἧπαρ τῆς πέψεως χάριν.[1]

For the conception of the cosmos as (being analogous to) a living organism, cp. the 'myths' in Plato's *Politicus* and *Timaeus* (with the significant difference that in these passages the idea of a creator *is* involved):

Plato *Polit.* 269 C 4 – D 3 τὸ γὰρ πᾶν τόδε τοτὲ μὲν αὐτὸς ὁ θεὸς συμποδηγεῖ πορευόμενον καὶ συγκυκλεῖ, τοτὲ δὲ ἀνῆκεν, ὅταν αἱ περίοδοι τοῦ προσήκοντος αὐτῷ μέτρον εἰλήφωσιν ἤδη χρόνου, τὸ δὲ πάλιν αὐτόματον εἰς τἀναντία περιάγεται, ζῷον ὂν καὶ φρόνησιν εἰληχὸς ἐκ τοῦ συναρμόσαντος αὐτὸ κατ' ἀρχάς. Cp. also 274 D 6 – E 1 (...) καθάπερ ὅλος ὁ κόσμος, ᾧ συμμιμούμενοι καὶ συνεπόμενοι τὸν ἀεὶ χρόνον νῦν μὲν οὕτως, τοτὲ δὲ ἐκείνως ζῶμέν τε καὶ φυόμεθα.

See also *Tim.* 32 C 5 ff., 92 D 4 ff., below.

Aristotle too makes this suggestion,[2] but only in order to reject the possibility of movement *de novo* even in the case of an animal:[3]

Arist. *Phys.* 252 b 18-28 οὐδεμίας γὰρ ἐν ἡμῖν ἐνούσης κινήσεως ἐνίοτε, ἀλλ' ἡσυχάζοντες ὅμως κινούμεθά ποτε, καὶ ἐγγίνεται ἐν ἡμῖν ἐξ ἡμῶν αὐτῶν ἀρχὴ κινήσεως, κἂν μηδὲν ἔξωθεν κινήσῃ. τοῦτο γὰρ ἐπὶ τῶν ἀψύχων οὐχ ὁρῶμεν ὁμοίως, ἀλλ' ἀεὶ κινεῖ τι αὐτὰ τῶν ἔξωθεν ἕτερον· τὸ δὲ ζῷον αὐτό φαμεν ἑαυτὸ κινεῖν. ὥστ' εἴπερ ἠρεμεῖ ποτε πάμπαν, ἐν ἀκινήτῳ κίνησις ἂν

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[1] Also Plato, *Tim.* 70 A of the θυμός; ARCHER-HIND (*ad loc.*) refers to Galenus *De placit.* II.230 καθάπερ ἐν ἀκροπόλει τῇ κεφαλῇ δίκην μεγάλου βασιλέως ὁ ἐγκέφαλος ἵδρυται.

[2] But cp. WATERLOW (1982) 238-9: "When in *Physics* VIII Aristotle takes the natural changes of organic creatures as his model for the ultimate eternal change, he does so for the purely negative reason that the only alternative sublunary models would be even less suitable, and not because he sees more than the vaguest resemblance between the eternal case and that of an organism. Indeed the list of criteria in [*Phys.* VIII.]4 by which he distinguishes sublunary self-changers from sublunary non-self-changers makes it doubtful whether there could be *any* resemblance. The body of the eternal self-changer is a physical sphere without internal physical diversification: this simplicity is a condition of its being absolutely indestructible. Since the eternal motion is single and simple and takes place in it as a whole, the body has no need of variegated parts with which to function. Nor can it stop and start or change in different ways. Nor can it be regarded as alive or ensouled in the sense in which this characteristic is displayed in one or more levels of biological functioning.".

[3] Cp. also οὕτω συστάντων ("since they are so ordered", tr. NUSSBAUM) in *MA* 703 a 35-6 as the even more concealed analogon of ὅταν ἅπαξ στῇ ἡ τάξις, *ibid.* 703 a 31, above.

γίγνοιτο ἐξ αὐτοῦ καὶ οὐκ ἔξωθεν. *εἰ δ' ἐν ζῴῳ τοῦτο δυνατὸν γενέσθαι, τί κωλύει τὸ αὐτὸ συμβῆναι καὶ κατὰ τὸ πᾶν; εἰ γὰρ ἐν μικρῷ κόσμῳ γίγνεται, καὶ ἐν μεγάλῳ·* καὶ εἰ ἐν τῷ κόσμῳ, κἀν τῷ ἀπείρῳ, εἴπερ ἐνδέχεται κινεῖσθαι τὸ ἄπειρον καὶ ἠρεμεῖν ὅλον., but

259 a 32 – b 16 (...) προήλθομεν ἐπὶ τὸ λαβεῖν ὅτι τῶν κινουμένων ἐστὶν ἀρχὴ κινουμένων μὲν ὃ αὐτὸ ἑαυτὸ κινεῖ, πάντων δὲ τὸ ἀκίνητον, ὁρῶμεν δὲ καὶ φανερῶς ὄντα τοιαῦτα ἃ κινεῖ αὐτὰ ἑαυτά, οἷον τὸ τῶν ἐμψύχων καὶ τὸ τῶν ζῴων γένος, ταῦτα δὲ καὶ δόξαν παρεῖχε μή ποτ' ἐνδέχεται κίνησιν ἐγγίγνεσθαι μὴ οὖσαν ὅλως, διὰ τὸ ἐν τούτοις ὁρᾶν ἡμᾶς τοῦτο συμβαῖνον· ἀκίνητα γάρ ποτε ὄντα κινεῖται πάλιν, ὡς δοκεῖ. *τοῦτο δὴ δεῖ λαβεῖν, ὅτι μίαν κίνησιν αὐτὰ κινεῖ, καὶ ὅτι ταύτην οὐ κυρίως· οὐ γὰρ ἐξ αὐτοῦ τὸ αἴτιον,* ἀλλ' ἔνεισιν ἄλλαι κινήσεις φυσικαὶ τοῖς ζῴοις, ἃς οὐ κινοῦνται δι' αὐτῶν, οἷον αὔξησις φθίσις ἀναπνοή, ἃς κινεῖται τῶν ζῴων ἕκαστον ἠρεμοῦν καὶ οὐ κινούμενον τὴν ὑφ' αὑτοῦ κίνησιν· τούτου δ' αἴτιον τὸ περιέχον καὶ πολλὰ τῶν εἰσιόντων, οἷον ἐνίων ἡ τροφή· πεττομένης μὲν γὰρ καθεύδουσι, διακρινομένης δὲ ἐγείρονται καὶ κινοῦσιν ἑαυτούς, *τῆς πρώτης ἀρχῆς ἔξωθεν οὔσης*. διὸ οὐκ ἀεὶ κινοῦνται συνεχῶς ὑφ' αὑτῶν· ἄλλο γὰρ τὸ κινοῦν, αὐτὸ κινούμενον καὶ μεταβάλλον πρὸς ἕκαστον τῶν κινούντων ἑαυτά.

Cp. also *Phys.* 253 a 14-8 αὐτὸ δέ φαμεν αὐτὸ κινεῖν οὐ πᾶσαν κίνησιν, ἀλλὰ τὴν κατὰ τόπον. οὐδὲν οὖν κωλύει, μᾶλλον δ' ἴσως ἀναγκαῖον, ἐν μὲν τῷ σώματι πολλὰς ἐγγίγνεσθαι κινήσεις ὑπὸ τοῦ περιέχοντος, τούτων δ' ἐνίας τὴν διάνοιαν ἢ τὴν ὄρεξιν κινεῖν, ἐκείνην δὲ τὸ ὅλον ἤδη ζῷον κινεῖν, ...

MA 701 a 2-6 φανερὸν δ' ἐκ τούτων καὶ ὅτι εὐλόγως ἡ φορὰ τελευταία τῶν κινήσεων ἐν τοῖς γινομένοις· κινεῖται γὰρ καὶ πορεύεται τὸ ζῷον ὀρέξει ἢ προαιρέσει, ἀλλοιωθέντος τινὸς κατὰ τὴν αἴσθησιν ἢ τὴν φαντασίαν.

"Essential to all later versions of the microcosmic scheme is the notion of order and hierarchy ... as operative in both the human and the cosmic sphere. This was developed especially by Plato and Aristotle, and it inevitably introduces the third term of the analogy: society or the state, intermediate between individual and cosmos and sharing the nature of both", GUTHRIE (1967) 62; "In its crudest form of magical sympathy, the correspondence between the order of the universe and that of the human community goes back to those primitive societies in which the regularity of the seasons and the crops depended on the well-being and correct actions of the priest-king; but as a philosophical concept, the centrality of *order* is perhaps the most typical of all *Greek* contributions to thought, embodied in the word *kosmos* itself. Creation meant the bringing of order into a mass of disorderly matter, and from an early date this was expressed in social terminology.", *ibid.* 63.

It may be noted that the present passage does not bear out GUTHRIE's statement that "the analogy between state and universe, which the Renaissance worked out in such loving detail, is not prominent in Greek thought, but makes its appearance in the general idea of the universality of *law*.", *ibid.* 65.

The threefold analogy is handed down to us in the context of political treatises ascribed to the Pythagoreans Diotogenes and Ecphantus:

Stob. VII.61 ff. (Διοτογένεος Πυθαγορείου ἐκ τοῦ Περὶ βασιλείας, IV.265.3-12 Hense, 72.16 ff. Thesleff) δεῖ γὰρ τὸ ἄριστον ὑπὸ τῶ ἀρίστω τιμᾶσθαι καὶ τὸ ἀγεμονέον ὑπὸ τῶ ἀγεμονέοντος. τῶν μὲν ὦν φύσει τιμιωτάτων ἄριστον ὁ θεός, τῶν δὲ περὶ γᾶν καὶ τὼς ἀνθρώπως ὁ βασιλεύς. ἔχει δὲ καὶ ὡς θεὸς ποτὶ κόσμον βασιλεὺς ποτὶ πόλιν· καὶ ὡς πόλις ποτὶ κόσμον βασιλεὺς ποτὶ θεόν. ἁ μὲν γὰρ πόλις ἐκ πολλῶν καὶ διαφερόντων συναρμοσθεῖσα κόσμω σύνταξιν καὶ ἁρμονίαν μεμίμαται, ὁ δὲ βασιλεὺς ἀρχὰν ἔχων ἀνυπεύθυνον, καὶ αὐτὸς ὢν νόμος ἔμψυχος, θεὸς ἐν ἀνθρώποις παρεσχαμάτισται.

Stob. VII.64 ff. (Ἐκφάντου Πυθαγορείου ἐκ τοῦ Περὶ βασιλείας, IV.271.19-272.4 Hense) παρὸ καὶ τόδε κόσμος ποταγορεύεται καὶ ἔντι τῶν ὄντων ζῴων τελεηότατον. ἐν δὲ τοῖς μέρεσιν αὐτῶν πολλοῖς τε ὄντεσσι καὶ διαφόροις τὰν φύσιν ἐξάρχει τι ζῷον καὶ † οἰκειότατον ἐν γενοῖν καὶ διὰ τὸ μετέχειν πλέον τῶ θείω. ... *ibid.* 275.15 – 276.2 ἁ δ' ἐν τᾷ πόλει φιλία κοινῶ τινος τέλεος ἐχόμενα τὰν τῶ παντὸς ὁμόνοιαν μεμίμαται· ἄνευ δὲ τὰς περὶ τὰς ἀρχὰς διατάξιος οὐδεμία ἂν πόλις οἰκοῖτο· εἰς δὲ ταύταν νόμων τε δεῖται καὶ τινὸς προστασίας πολιτικᾶς τό τε ἄρχον καὶ ἀρχόμενον, αἵ πως σῴζετο δι' αὐτό. ἐκ τούτων κοινὸν ἀγαθὸν εὐαρμοστία τις καὶ τῶν πολλῶν ὁμοφωνία μετὰ πειθοὺς συνᾳδοίσας.

The way πόλις and ζῷον are used in the present passage as an example of a differentiated whole thus seems to differ from the picture in both Plato and Aristotle[1] in that there is no suggestion of an external agent being responsible for the disposition of the whole in the first place: see *ad* πλὴν ἴσως οὐχ ὁμοίως ληπτέον ὡς εἰς τὸ ἀμερὲς ἄγοντας, above. Cp. also the analogy between the cosmos and a ζῷον in 10 a 16 ff.: ἆρ' οὖν εἴ γε μηδ' ἐν τοῖς ζῴοις τὴν ζωὴν ἢ ὡδὶ ζητητέον, οὐδ' ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις τὴν φορὰν ἢ τρόπον τινὰ ἀφωρισμένον; (with commentary *ad loc.*, pp. 481 ff. below).

One may compare the view ascribed to Th.' successor Strato of Lampsacus:

Strato Fr. 34 Wehrli (= Lact. *De ira dei* X.1) naturam vero, ut ait Strato, habere in se vim gignendi et minuendi, sed eam nec sensum habere ullum nec figuram, ut intelligamus omnia quasi sua sponte esse generata, ***nullo artifice nec auctore.***

Strato however seems to have moved one step further away from purposefulness and formism:

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[1] And to resemble, in this respect, the analogies ascribed to Diotogenes and Ecphantus above? Cp. also the passages from a Stoic context quoted below.

Fr. 35 Wehrli (= Plut. *Adv. Coloth.* XIV. 1115 b) καὶ μὴν τῶν ἄλλων Περιπατητικῶν ὁ κορυφαιότατος Στράτων οὔτ' Ἀριστοτέλει κατὰ πολλὰ συμφέρεται καὶ Πλάτωνι τὰς ἐναντίας ἔσχηκε δόξας περὶ κινήσεως περὶ νοῦ καὶ περὶ ψυχῆς καὶ περὶ γενέσεως· καὶ τελευτῶν τὸν κόσμον αὐτὸν οὐ ζῷον εἶναί φησι, τὸ δὲ κατὰ φύσιν ἕπεσθαι τῷ κατὰ τύχην· ἀρχὴν γὰρ ἐνδιδόναι τὸ αὐτόματον,[1] εἶθ' οὕτω περαίνεσθαι τῶν φυσικῶν παθῶν ἕκαστον.

As a matter of fact, Strato may conceivably have developed this view as a polemic against Th.' argument[2] (which, as indicated above, may itself be seen as a criticism of the remains of formism in the teleology of the Aristotelian position).

In any case, this possibility is not less plausible, it seems, than the supposition that Strato's argument was directed against the Stoa, as WEHRLI (54 *ad loc.*) suggests—although of course the Stoic conception of the cosmos is more strongly organicistic than that to be ascribed to Th.; for the Stoic conception, see esp.

SVF II.169.14 ff. (= Arius Didymus *ap.* Eus. *Praep. ev.* XV 15) ὅλον δὲ τὸν κόσμον σὺν τοῖς ἑαυτοῦ μέρεσι προσαγορεύουσι θεόν· τοῦτον δὲ ἕνα μόνον εἶναί φασι καὶ πεπερασμένον καὶ ζῷον καὶ ἀΐδιον καὶ θεόν. (25 ff.:) ὃν γὰρ τρόπον πόλις λέγεται διχῶς τό τε οἰκητήριον καὶ τὸ ἐκ τῶν ἐνοικούντων σὺν τοῖς πολίταις σύστημα, οὕτω καὶ ὁ κόσμος οἱονεὶ πόλις ἐστὶν ἐκ θεῶν καὶ ἀνθρώπων συνεστῶσα, τῶν μὲν θεῶν τὴν ἡγεμονίαν ἐχόντων, τῶν δ' ἀνθρώπων ὑποτεταγμένων.

SVF II.191.34 ff. (= D.L. VII.142) ὅτι δὲ καὶ ζῷον ὁ κόσμος καὶ λογικὸν καὶ ἔμψυχον καὶ νοερὸν καὶ Χρύσιππός φησιν ἐν πρώτῳ περὶ Προνοίας καὶ Ἀπολλόδωρός φησιν ἐν τῇ φυσικῇ καὶ Ποσειδώνιος· ζῷον μὲν οὕτως ὄντα, οὐσίαν ἔμψυχον αἰσθητικήν. τὸ γὰρ ζῷον τοῦ μὴ ζῴου κρεῖττον· οὐδὲν δὲ τοῦ κόσμου κρεῖττον. ζῷον ἄρα ὁ κόσμος. ἔμψυχον δέ, ὡς δῆλον ἐκ τῆς ἡμετέρας ψυχῆς ἐκεῖθεν οὔσης ἀποσπάσματος.

Finally, Th. adds that this possible way of evading the problem at issue is in accordance with the claim, familiar in the Academic-Peripatetic tradition (hence **δή**), that the cosmos is the most complete of things (**τελεώτατον**),[3] comprising as it does all there is—which as far as Th. is concerned may also mean 'completeness to perfection'.

For this aspect of τέλεος, see

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[1] Cp. "deus sine animo", Strato Fr. 37 Wehrli.

[2] Cp. GATZEMEIER (1970) 107: "(fr. 35 entstammt der Polemik,) und es ist zu vermuten, dass die Gleichsetzung von τύχη und αὐτόματον auf die gegnerische Einstellung zurückzuführen ist."; cp. also WEHRLI 52 *ad loc.*

[3] The claim, of course, chimes in with the association of ὅλος (see ὁ ὅλος οὐρανός, above) and τέλειος as such: "τέλειος ist das 'Ganze', insofern es eine von der Natur seines Wesens vorgezeichnete Möglichkeit voll erfüllt. Das τέλειον ὅλον, so könnte man sagen, ἔχει τὴν ἑαυτοῦ φύσιν (sc. die φύσις eines ὅλον)." WALLACH (1967) 29. See also the literature referred to by WALLACH, p. 28 note 3.

Arist. *Met.* 1055 a 10-6 ἀλλὰ μὴν τό γε μέγιστον ἐν ἑκάστῳ γένει τέλειον. μέγιστόν τε γὰρ οὗ μή ἐστιν ὑπερβολή, καὶ τέλειον οὗ μή ἐστιν ἔξω λαβεῖν τι δυνατόν· τέλος γὰρ ἔχει ἡ τελεία διαφορά, ὥσπερ καὶ τἆλλα τῷ τέλος ἔχειν λέγεται τέλεια. τοῦ δὲ τέλους οὐθὲν ἔξω· ἔσχατον γὰρ ἐν παντὶ καὶ περιέχει. διὸ οὐδὲν ἔξω τοῦ τέλους, οὐδὲ προσδεῖται οὐδενὸς τὸ τέλειον.

It is applied to the cosmic whole by Aristotle in e.g.

Arist. *Cael.* 279 a 6-11 φανερὸν τοίνυν ... ὅτι οὔτ' ἔστιν ἔξω οὔτ' ἐγχωρεῖ γενέσθαι σώματος ὄγκον οὐδενός· ἐξ ἁπάσης γάρ ἐστι τῆς οἰκείας ὕλης ὁ πᾶς κόσμος (ὕλη γὰρ ἦν αὐτῷ τὸ φυσικὸν σῶμα καὶ αἰσθητόν), ὥστ' οὔτε νῦν εἰσὶ πλείους οὐρανοὶ οὔτ' ἐγένοντο, οὔτ' ἐνδέχεται γενέσθαι πλείους· ἀλλ' εἷς καὶ μόνος καὶ τέλειος οὗτος οὐρανός ἐστιν. (Cp. 268 a 20.)

The idea plays an even more central role in Plato's *Timaeus*, where owing to the creation myth τελεώτατον is not so much 'completenesss brought to perfection' as the most complete of *perceptible* things':[1]

Plato *Tim.* 32 C 5 – 33 A 2 τῶν δὲ δὴ τεττάρων ἓν ὅλον ἕκαστον εἴληφεν ἡ τοῦ κόσμου σύστασις. ἐκ γὰρ πυρὸς παντὸς ὕδατός τε καὶ ἀέρος καὶ γῆς συνέστησεν αὐτὸν ὁ συνιστάς, μέρος οὐδὲν οὐδενὸς οὐδὲ δύναμιν ἔξωθεν ὑπολιπών, τάδε διανοηθείς, πρῶτον μὲν ἵνα ὅλον ὅτι μάλιστα ζῷον τέλεον ἐκ τελέων τῶν μερῶν εἴη, πρὸς δὲ τούτοις ἕν, ἅτε οὐχ ὑπολελειμμένων ἐξ ὧν ἄλλο τοιοῦτον γένοιτ' ἄν, ...

34 A 8 – B 3 οὗτος δὴ πᾶς ὄντος ἀεὶ λογισμὸς θεοῦ περὶ τὸν ποτὲ ἐσόμενον θεὸν λογισθεὶς λεῖον καὶ ὁμαλὸν πανταχῇ τε ἐκ μέσου ἴσον καὶ ὅλον καὶ τέλεον ἐκ τελέων σωμάτων σῶμα ἐποίησεν· ...

92 C 4-9 καὶ δὴ καὶ τέλος περὶ τοῦ παντὸς νῦν ἤδη τὸν λόγον ἡμῖν φῶμεν ἔχειν· θνητὰ γὰρ καὶ ἀθάνατα ζῷα λαβὼν καὶ συμπληρωθεὶς ὅδε ὁ κόσμος οὕτω, ζῷον ὁρατὸν τὰ ὁρατὰ περιέχον, εἰκὼν τοῦ νοητοῦ θεὸς αἰσθητός, μέγιστος καὶ ἄριστος κάλλιστός τε καὶ τελεώτατος γέγονεν εἷς οὐρανὸς ὅδε μονογενὴς ὤν.

Accordingly, there is a polemical edge to the way in which here the familiar qualification of the cosmos as τελεώτατον is used by Th. as an argument in favour of a conception of the cosmos which is complete in the sense that it *really* does not require an explanation of its being so outside itself.[2]

To sum up, the possible solution advanced by Th. amounts to a modification of the Aristotelian point of view, it seems, which consists in abandoning the partless first principle; this is done in terms which not by accident happen to

[1] The superlative also, with respect to its shape (sc. 'the best possible as far as extension goes') in 33 B 4-6 διὸ καὶ σφαιροειδές, ..., κυκλοτερὲς αὐτὸ ἐτορνεύσατο, πάντων τελεώτατον ὁμοιότατόν τε αὐτὸ ἑαυτῷ σχημάτων, ...

[2] *Contra* L-M *ad loc.*, see p. 353 n. 3 above.

correspond to the characterization of the cosmos in Plato's *Timaeus*—although there the implications are in a way to the contrary, since the cosmos is depicted as generated by the Demiurge after the eternal παράδειγμα (both the Demiurge and the παράδειγμα having an existence prior to, and independent from, the cosmos itself, which thus is only relatively speaking 'most complete').

Finally, it may be said in conclusion that Chapter V in two respects modifies the provisional conclusion formulated at the end of Chapter I: in V.1 it had been argued that the condition of the principle does not necessarily involve ἀκινησία, even that there is no reason to distinguish the ἐνέργεια ascribed to it from κίνησις;[1] in V.2 Th. argues that there is no reason for asserting that in the case of the first principle divisibility does not apply:[2] there is no reason not to call the principle divisible or quantitative,[3] on the understanding that the cosmos is a differentiated composite whole.

[1] See *ad* τὴν ἐνέργειαν, 5 a 7 (pp. 148 ff. above).

[2] Such in contrast to the even less warranted *denial* of division to the principle, rejected already in I.6, 5 a 8-13: see commentary *ad* 5 a 8-10, 5 a 10-3 above.

[3] See *ad* μὴ διαιρετὸν μηδὲ ποσόν τι λέγων, 5 a 8-9 (pp. 150-3 above).

CHAPTER SIX

VI. (8 a 8-20): *To return to the question of the elementary principles: should matter be conceived as non-being, i.e., potential being, or rather as indeterminate being as in the case of the crafts? It seems to be more likely that being applies already at the level of matter; this 'being' is without any specification, but it does involve some capacity.*

In any case the status of matter should be grasped by an analogy with the crafts or by another comparison.

8 a 8-14 ἐπιποθεῖ δέ ... κατὰ τοὺς λόγους·

..., ἡ δὲ γένεσις, ἣ οὐσία γ' αὐτῶν prop. R-F; ἡ δὲ γένεσις ἡ οὐσία γ' αὐτῶν MSS.; ... , ᾗ δὲ γένεσις, ἡ οὐσία γ'αὐτῶν R-F; εἰ δὲ γένεσις, ἡ οὐσία γ' αὐτῶν USENER (1890); εἰ δὲ γένεσις ἢ οὐσία γε αὐτῶν USENER (1861) 277; ἡ γένεσις, ἡ οὐσία δ' αὐτων coni. R-F; ἡ γένεσις ἢ οὐσία γ' αὐτῶν L-M; ... , ἡ δὲ γένεσις τῆς οὐσίας ἕνεκα Wimmer.
τῷ μορφοῦσθαι MSS.; τὸ μορφοῦσθαι coni. USENER (1861) 277, Wimmer.

For the compound **ἐπιποθεῖν**, which seems to imply that there was a previous discussion of the issue, cp. ἐπιζητεῖν 5 b 11 (also ἐπιθεωρεῖσθαι, 11 b 13);[1] Th. now returns to the question (closely connected with that) of the elementary principles as discussed in Ch. IV. For the use of the simple verb (with ἔτι) in a similar (dialectical) context, see Plato *Symp.* 204 D 8 ἀλλ' ἔτι ποθεῖ, ἔφη, ἡ ἀπόκρισις ἐρώτησιν τοιάνδε· τί ... ;[2]

For the brachylogy in **πῶς ποτε** ... ὁ μέρισμος (sc. ληπτέος), see

HP III.2.4 ὁ μὲν οὖν τῶν ἀγρίων ἀφορισμὸς εἴθ' οὕτως ἢ καὶ ἄλλως ληπτέος, ...
CP I.22.7 καὶ περὶ μὲν θερμότητος ἐκ τούτων ληπτέος ὁ διορισμός.
Arist. *Met.* 1064 a 21-3 δεῖ μὴ λανθάνειν ... πῶς ὁ τῆς οὐσίας λόγος ληπτέος, πότερον ὡς τὸ σιμόν, ἢ μᾶλλον ὡς τὸ κοῖλον.

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[1] Outside of 'dialectical' contexts (where a problem or question is involved, as here) the compound merely seems to imply that there is some personal or natural ground for the desire denoted by the verb (cp. *ad* ἐπιζητεῖν, 5 b 11, pp. 221-2 above); see e.g. Hdt. V.93, Ἱππίης δὲ αὐτὸν ἀμείβετο τοὺς αὐτοὺς ἐπικαλέσας θεοὺς ἐκείνῳ, ἦ μὲν Κορινθίους μάλιστα πάντων *ἐπιποθήσειν* Πεισιστρατίδας, ὅταν σφι ἥκωσι ἡμέραι αἱ κύριαι ἀνιᾶσθαι ὑπ' Ἀθηναίων. Cp. 149.9 FHS&G (= Simpl. *In Phys.* 639.20-2) διὸ καὶ ἕκαστον ἐν τῇ αὐτοῦ χώρᾳ λέγεται τῷ ἔχειν τὴν οἰκείαν τάξιν, ἐπεὶ καὶ τῶν τοῦ σώματος μερῶν ἕκαστον *ἐπιποθήσειεν* ἂν καὶ ἀπαιτήσειε τὴν ἑαυτοῦ χώραν καὶ θέσιν.

[2] "the answer suggests a further question, ..." tr. JOWETT.

Cp. also ληπτέον 8 a 20.

τῶν ὄντων by its front position right from the start poses the thorny problem at issue here, since the question precisely is where, in the context of matter and form (**ὕλη**, **μορφή**: noticeably, Th. uses the more physical term),[1] 'being' comes in.[2] **ὁ μερισμός** denotes the result of διαίρεσις or (in cases involving a borderline between two issues) of δι-/ἀφορισμός; see e.g.

> *HP* I.1.11 ἀλλὰ μάλιστα ταῦτα (sc. things like root, stem, branch) ὑπάρχει, καθάπερ εἴρηται, τοῖς δένδροις κἀκείνων οἰκειότερος ὁ μερισμός, for which cp. I.1.9 ἔστι δὲ πρῶτα μὲν καὶ μέγιστα καὶ κοινὰ τῶν πλείστων τάδε, ῥίζα καυλὸς ἀκρεμὼν κλάδος, *εἰς ἃ διέλοιτ' ἄν τις* ὥσπερ εἰς μέλη, καθάπερ ἐπὶ τῶν ζῴων.

Hence it is also used in the more 'dynamic' sense of "distribution":

> *CP* I.12.6 ἡ δ' ὑπὸ τοῦ ψύχους κώλυσις τῆς βλαστήσεως ἀληθὴς μέν, οὐκέτι δὲ ποιεῖ μερισμὸν φυσικόν·, referring to (I.12.5) ἔν γάρ τι τὸ γεννῶν, οὐχ ὥσπερ Ἐμπεδοκλῆς διαιρεῖ καὶ μερίζει τὴν μὲν γῆν εἰς τὰς ῥίζας, τὸν δ' αἰθέρα εἰς τοὺς βλαστούς, ...[3]
>
> I.16.5 ἐν δὲ τοῖς φυτοῖς τρεῖς τινές εἰσιν οἱ μερισμοί (the distributions of food)· πρὸς αὐτὸ τὸ δένδρον καὶ τὴν βλάστησιν κ.τ.λ.

The question here concerns the division of 'things that are' into matter and shape: where, in the case of τὰ ὄντα, does τὸ εἶναι come in? As will subsequently appear, this question concerns the ontological status of matter in particular.

The first alternative (**πότερον**) is that shape and matter are conceived as being (**ὡς τὸ μὲν ὄν**) as opposed to non-being (**τὸ δὲ μὴ ὄν**) respectively, the latter being specified here as (not-being, but) being potentially (**δυνάμει δ' ὄν**). This admittedly may be regarded as a not very congenial way of introducing Aristotle's effort to provide a solution for the problem of generation posed by Parmenides' disqualification of the sensible world. All the same, the qualification (τὸ) δυνάμει ὄν in itself does detract from the 'being' involved; and even if this not-being is interpreted, in the Aristotelian sense, as 'not being this particular thing', one might feel—as Th. seems to have done—that this answer begs the question as to the ontological status of matter.[4]

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[1] Whereas εἶδος is associated also with classification and definition: see ἀόριστον τοῖς εἴδεσιν, 8 a 18. Cp. PAGE (1985) 62.

[2] *Contra* L-M, who interpret τῶν ὄντων as a "génitif de relation" to be connected with πῶς ποτε: see below.

[3] "letting earth work with the roots and aether with the shoots", tr. EINARSON/LINK.

[4] The point Th. seems to be making is nullified if it is supposed that "ὄν prenne successivement le sens d' "être quelque chose" (dans τὸ δὲ μὴ ὄν, δυνάμει δ' ὄν), et d' "exister"

Seen in this light, Th.' reasoning is not so much 'confused', as REALE (142) believes[1] ("Teofrasto monstra ... di aver smarrito il senso di queste fondamentali distinzioni dei significati dell'essere e del non-essere, fatte dal Maestro.", 143), as inclined to reject complications inherited from the Academic tradition.

The condition of the "what is not, i.e. only potentially" is described as "**ἀγόμενον εἰς ἐνέργειαν**" (ἐνέργεια, as contrasted with δύναμις, here obviously in the technical Aristotelian sense of 'actuality': see *ad* 7 b 13). This phrase noticeably does not specify the interpretation of the voice of the verb. It may be either middle: "en marche vers", TRICOT; "in movimento verso", REALE: compare

Arist. *EN* 1153 a 11-2 καὶ τέλος οὐ πασῶν ἕτερόν τι, ἀλλὰ τῶν εἰς τὴν τελέωσιν ἀγομένων (sc. ἡδονῶν) τῆς φύσεως.[2]
—for the idea, cp. *Cael.* 311 a 4-6 φανερὸν δὴ ὅτι δυνάμει ὄν, εἰς ἐντελέχειαν ἰὸν ἔρχεται ἐκεῖ καὶ εἰς τὸ τοσοῦτον καὶ τὸ τοιοῦτον, ὅπου ἡ ἐντελέχεια καὶ ὅσου καὶ οἵου.—,

or passive: "drawn towards actuality" (R-F, also L-M), compare

Plato *Resp.* 572 D 9 – E 2 (τὸν ὑὸν) ἀγόμενον ... εἰς πᾶσαν παρανομίαν, ὀνομαζομένην δ' ὑπὸ τῶν ἀγόντων ἐλευθερίαν ἅπασαν, ...

—the latter on the understanding that the agent is not specified. In this respect, one might think of the conception of a first principle as a leader, but also of the 'attraction' inspired by a principle as the Aristotlelian 'object of desire', analogously to the power of a magnetic stone: see e.g. *Lap.* 29 ἡ τὸν σίδηρον ἄγουσα (sc. λίθος: cp. *ad* 5 a 1-2, pp. 140-1 above); also

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(dans τὸ μὲν ὄν et ἢ ὄν μέν).", as L-M (*ad loc.*) do; as a matter of fact, τὸ δ' εἶναι ... ἀληθὲς ὑπάρχοι κατ' αὐτήν in 8 a 15-6, presented as an advantage of the second alternative, shows that in the case of τὸ δὲ μὴ ὄν, δυνάμει δ' ὄν too Th. takes τὸ εἶναι to have existential value.

In any case, justice is not done either to Aristotle (who by characterizing matter as not being <this particular entity> found his own solution for the problem of generation) or to Th. (who went one step further and rejected the conception of matter as τὸ μὴ ὄν altogether), if one believes that "On tient ici un nouvel exemple du fait que les deux emplois, prédicatif et existentiel, du verbe "être" ne sont pas systématiquement distingués chez les philosophes grecs." (L-M *ad loc.*).

[1] See also REALE 187 *ad loc.*: "la spiegazione dell' USENER [(1861) 277] non fa che riconfermare l'insussistenza del'aporia e la confusione che TEOFRASTO fa a questo proposito. Che differenza può mai esserci, infatti, fra un "Nichtseiendes das aber das Vermögen des Seins hat und zur Selbstbethätigung gebracht werden kann" e un "Seiendes dem es aber noch an der Bestimmtheit des Begriffs fehlt"? Evidentemente nessuna!".

[2] "nor have they all of them some end other than themselves: this is only true of the pleasures of progress towards the perfection of our nature", tr. RACKHAM. But with a different, passive interpretation "and not all pleasures have an end different from themselves, but only the pleasures of persons who are being led to the completing of their nature", *RevOT*.

Plato *Ion* 533 D 1 – E 3 ἔστι γὰρ τοῦτο τέχνη μὲν οὐκ ὂν παρὰ σοὶ περὶ Ὁμήρου εὖ λέγειν, ὃ νυνδὴ ἔλεγον, θεία δὲ δύναμις ἥ σε κινεῖ, ὥσπερ ἐν τῇ λίθῳ ἣν Εὐριπίδης μὲν Μαγνῆτιν ὠνόμασεν, οἱ δὲ πολλοὶ Ἡρακλείαν. καὶ γὰρ αὕτη ἡ λίθος οὐ μόνον αὐτοὺς τοὺς δακτυλίους *ἄγει* τοὺς σιδηροῦς, ἀλλὰ καὶ δύναμιν ἐντίθησι τοῖς δακτυλίοις ὥστ' αὖ δύνασθαι ταὐτὸν τοῦτο ποιεῖν ὅπερ ἡ λίθος, ἄλλους *ἄγειν* δακτυλίους, ὥστ' ἐνίοτε ὁρμαθὸς μακρὸς πάνυ σιδηρίων καὶ δακτυλίων ἐξ ἀλλήλων ἤρτηται· πᾶσι δὲ τούτοις ἐξ ἐκείνης τῆς λίθου ἡ δύναμις ἀνήρτηται.

The ambivalence may be intentional here; if however one has to make a choice, the interpretation as a middle voice seems to be preferable, because apparently the present paragraph primarily concerns the ontological status of matter as such—and its role in the generation of the perceptible entities—, rather than a moving cause which might be acting on matter.[1]

In the alternative conception (**ἤ**) of a division of reality into matter and shape non-being does not apply, matter in this case being conceived as indeed some sort of being (**ὂν μέν**), but indeterminate (**ἀόριστον δέ**: τίθεμεν τὸ ἀόριστον πρὶν ὁρισθῆναι καὶ μετασχεῖν εἴδους τινός, Arist. *Met.* 989 b 18; cp. 8 a 18). In order to elucidate the indeterminateness of matter the analogy of nature and the crafts (**καθάπερ ἐν ταῖς τέχναις**) is used here again; it already featured in the context of the theory of shaped elementary principles in Ch. IV, 7 a 4-6; see pp. 292 ff. above.

The analogy, which derives its persuasive force from the metaphysical use of the term ὕλη ("timber") as such, in the present context apparently rests on the common experience that the raw material out of which artefacts are shaped in some way 'is', whereas on the other hand the shape acquired during the process of making the artefact is obviously lacking.[2]—The analogy, of course, fits a variety of purposes: from a slightly different point of view it may also be adduced in favour of the conception of matter as τὸ δυνάμει ὄν: see e.g.

Arist. *GA* 734 b 34-6 (...) ἡ κίνησις ἡ ἀπὸ τοῦ γεννήσαντος τοῦ ἐντελεχείᾳ ὄντος ὅ ἐστι δυνάμει ἐξ οὗ γίνεται, ὥσπερ καὶ ἐπὶ τῶν γιγνομένων κατὰ τέχνην· ...

—which is not a *very* different conception anyway: see below.

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[1] For the different concept of an active factor *inherent in* matter, possibly implied by δύναμιν δέ τιν' ἔχον (8 a 19), see below.

[2] Cp. SOLMSEN (1961) 401-2.

The asyndetic iuxtaposition in the manuscript tradition (ἡ δὲ γένεσις ἡ οὐσία γ': see above) is not likely to be sound. I adopt R-F' (second) conjecture ἡ δὲ γένεσις ἢ οὐσία γ' αὐτῶν (without a comma after γένεσις), ἢ ... γ(ε) adding an alternative which is the utmost the author is prepared to accept; cp. ἢ καὶ τοῦτ' ἄπορον ἢ οὐ ῥᾴδιόν γε εἰπεῖν 9 b 2; also *Sud.* 9 ἐπεὶ καὶ διὰ τοῦτο καὶ ἐκ τῆς κεφαλῆς ἄοσμος ἢ ἧττόν γε τοῦ ἐκ τοῦ σώματος, and *HP* I.10.2 πάντα δὴ ἢ τά γε πλεῖστα.

The point seems to be that speaking of a **γένεσις** "of things" (**αὐτῶν**, referring to τῶν ὄντων)[1] by itself might be suggestive of a transition from non-being to being; **οὐσία**, then, is added here as the safer term, referring to the 'being' of the compound which is the product of matter being shaped (cp. Arist. *Met.* 999 b 23-4 (...) πῶς γίγνεται ἡ ὕλη τούτων ἕκαστον καὶ ἔστι τὸ σύνολον ἄμφω ταῦτα; "how does the matter become each of the individuals, and how *is* the concrete thing these two elements?" *RevOT*):[2] for this use of οὐσία, cp. 149 FHS&G, where mention is made of τάξις τις καὶ θέσις τῶν μερῶν which relates πρὸς τὴν ὅλην οὐσίαν (6-7), and in the present treatise ἡ ἅπασα οὐσία used with reference to the cosmos as a whole (which comes, so to speak, from opposites: 7 a 9-10, see also 4 a 13); also

> Arist. *Met.* 1043 a 26-7 φανερὸν δὴ ἐκ τῶν εἰρημένων τίς ἡ αἰσθητὴ οὐσία ἐστὶ καὶ πῶς· ἡ μὲν γὰρ ὡς ὕλη, ἡ δ' ὡς μορφὴ καὶ ἐνέργεια· ἡ δὲ τρίτη *ἡ ἐκ τούτων.*

Accordingly, the most proper rendering of οὐσία here would be "being", which however in this context obviously is out of the question, the point being precisely that according to this conception τὸ εἶναι already applies at the level of matter; 'essence' will do as far as Th. is concerned, since for him the essence (or, for that matter, the 'nature')[3] of an entity is less strongly linked with form (or actuality) than is the case in the conception of essence which seems to have been embraced by Aristotle: see pp. 92-3, and Introduction, pp. 31-2 above.

The dative **τῷ μορφοῦσθαι**[4] goes smoothly with ἡ γένεσις.[5] If one as-

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[1] For the different interpretation by L-M, see below.

[2] It may be noted that the possibility that οὐσία replaces γένεσις as constituting *a way of referring to* an entity as matter *plus* form (rather than *qua* its matter) is unlikely in view of the present tense of τῷ μορφοῦσθαι: cp. *ad* οὐδέ, 8 a 17.

[3] For the coordination of these two, see e.g. *HP* IV.13.4 ἣ δ' ὥσπερ οὐσία καὶ φύσις τοῦ δένδρου μάλιστ' ἂν φαίνοιτο τὸ στέλεχος.

[4] The verb apparently is not attested before Th.: see LSJ. See the distinction between animals and plants in *CP* V.6.7 συμβαίνει δὲ τρόπον τινὰ καὶ ἐπὶ τῶν ζῴων τοῦτο, κατὰ μικρότητα καὶ μέγεθος καὶ βραχύτητα καὶ μῆκος, μεμορφωμένα γὰρ εὐθὺς ἐκεῖνα, ταῦτα δ' (sc. plants) ἅμα τῇ γενέσει μορφοῦται—where the idea seems to be that animals develop their shape in the ('vegetative'?) phase preceding birth. Cp. *CP* I.16.11.

[5] Cp. *Ign.* 10 γεννᾷ μὲν γὰρ ("Feuer bringt Feuer hervor", tr. STEINMETZ (1964) 122) τῷ ἐπὶ

sumes an ellipse of γίνεται[1] the construction with οὐσία as subject replacing ἡ γένεσις runs quite smoothly too. One may note that, if γίνεται is the verb implied, the ellipse in the case of οὐσία is functional indeed, the point apparently being that οὐσία does not have the negative connotations of γένεσις.

The plural **κατὰ τοὺς λόγους** should be interpreted distributively: (by being shaped) "according to the formula applying in each case". The formula of an entity consists in its εἴδη (cp. ἀόριστον τοῖς εἴδεσιν, 8 a 18), and may be conceived as the code (as it were) according to which unspecified being (i.e., matter)[2] gets its specific characteristics. Compare

Arist. *Phys.* 193 a 36 – b 3 τὸ γὰρ δυνάμει σὰρξ ἢ ὀστοῦν οὔτ' ἔχει πω τὴν ἑαυτοῦ φύσιν, πρὶν ἂν λάβῃ τὸ εἶδος τὸ κατὰ τὸν λόγον—ᾧ ὁριζόμενοι λέγομεν τί ἐστι σὰρξ ἢ ὀστοῦν, οὔτε φύσει ἐστίν. Compare

193 a 28-33 (ἕνα μὲν οὖν τρόπον οὕτως ἡ φύσις λέγεται ἡ πρώτη ἑκάστῳ ὑποκειμένη ὕλη τῶν ἐχόντων ἐν αὐτοῖς ἀρχὴν κινήσεως καὶ μεταβολῆς·) ἄλλον δὲ τρόπον ἡ μορφὴ καὶ τὸ εἶδος τὸ κατὰ τὸν λόγον. ὥσπερ γὰρ τέχνη λέγεται τὸ κατὰ τὴν τέχνην καὶ τὸ τεχνικόν, οὕτω καὶ φύσις τὸ κατὰ φύσιν [λέγεται] καὶ τὸ φυσικόν, ...

Ps.-Arist. *Meteor.* IV 389 b 28-9 ἔστιν δ' ἅπαντα ὡς μὲν ἐξ ὕλης ἐκ τῶν εἰρημένων (sc. τῶν στοιχείων), ὡς δὲ κατ' οὐσίαν τῷ λόγῳ;[3] cp. also

390 a 5-6 ἡ μὲν ὕλη οὐθὲν ἄλλο παρ' αὐτήν, ἡ δ' οὐσία οὐθὲν ἄλλο ἢ λόγος.

The phrase τῷ μορφοῦσθαι κατὰ τοὺς λόγους thus in itself suggests a parallelism between the analysis of a thing's constitution and its definition.

Contra L-M, who adopt another, more drastic conjecture of R-F and read: ἢ ὂν μέν, ἀόριστον δέ, καθάπερ ἐν ταῖς τέχναις ἡ γένεσις ἢ οὐσία γ' αὐτῶν τῷ μορφοῦσθαι κατὰ τοὺς λόγους. ("ou bien est-elle un être, mais indéterminé, comme, dans le cas des techniques, leur génération ou même leur existence même [est due] à ce que [ces objets] reçoivent une forme conformément à leurs définitions?").

Now, deleting δέ in ἡ δὲ γένεσις at first sight has the advantage that the present tense of τῷ μορφοῦσθαι goes more easily with artefacts than with natural entities; all the same, it is not only unnecessary (as hopefully has been demonstrated above)—and, it might be added, not quite the illustration *of ἀόριστον* one would have expected after καθάπερ—, but it also necessitates a rather artificial inter-

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πλέον ἀεὶ προιέναι, *Vent.* 15 εἰ δὲ πάντων τῶν πνευμάτων ἡ αὐτὴ καὶ ὑπὸ τῶν αὐτῶν γένεσις τῷ τι περιλαβεῖν, ὁ ἥλιος ἂν ὁ ποιῶν εἴη.

[1] Rather than of ἐστί, in which case one would rather have expected *ἐν τῷ μορφοῦσθαι?; cp. e.g. Arist. *GA* 728 a 25 ὥστε φανερὸν ὅτι εὐλόγως γίγνεται ἐκ τούτου ἡ γένεσις). See HINDENLANG (1910) 89 ff.

[2] μετὰ μὲν γὰρ τῆς ὕλης (sc. λόγος) οὐκ ἔστιν (ἀόριστον γάρ), Arist. *Met.* 1037 a 27.

[3] "All the homogeneous bodies consist of the elements described, as matter, but their essence is determined by their definition", *RevOT*.

pretation of αὐτῶν: "le pronom doit être rapporté *ad sensum* aux produits des techniques, bien que, syntaxiquement, il renvoie aux techniques elles-mêmes" (L-M *ad loc.*)

When hereafter Th. brings forward an advantage of the second alternative of this disjunction over the first, the upshot of the disjunction proves to be a reappraisal of matter as a constituent which being applies to in the full sense of the word. Since the argument is formulated as a disjunction, this preference for the latter conception of matter (to be grasped by means of an analogy to the crafts) noticeably implies a rejection of the Aristotelian concept of 'being potentially', interpreted (rightly or not) as a defective kind of being, and thus involving non-being of some kind.

8 a 14-9 ἀλλ' οὕτω γ' ... ἔχον.

κατ' αὐτήν PB[2] ut vid.; καθ' αὐτήν JC[1]LAB; καθ' αὑτήν C.

ἀλλ(ά) sets aside all further considerations that might bear on this question.[1] As in 4 a 17, **οὕτω** summarizes the latter of two alternatives discussed;[2] **γ**(ε) limits what is going to be said here exclusively to this second conception of matter.

With **εἰς ... τὸ βέλτιον ἡ μετάβασις** Th. grants (**μέν**) that the point of view expressed in 7 a 7-9, that matter *plus* form is 'better' than matter alone (because of the increase both in completeness and in orderliness), may be correct (**τάχ' ἂν ... εἴη**).[3] Noticeably, the point is not that being would be better than not-being,[4] and this in itself is an emancipation from the discussion set by the Eleatic point of view.

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[1] *Contra* L-M: "ἀλλά s'explique par le rejet implicite de la première solution, et introduit deux conséquences positives découlant de l'acceptation de la seconde." (*ad loc.*).

[2] Cp. *HP* I.11.4 (...) τὰ μὲν ...· τὰ δὲ ...· οὕτω δ'... Also κατά τε δὴ τὸν λόγον οὕτω φαίνεται καὶ ἐπὶ τῶν ἔργων, Arist. *GA* 729 b 8, quoted p. 373 below.

[3] "saepe τάχα non tam dubitantis est, quam cum modestia quadam affirmantis", Bonitz 749 a 4-5 s.v.

[4] To judge by the present treatise Th. would not, I think, have subscribed to a statement such as βέλτιον δὲ τὸ εἶναι ἢ τὸ μὴ εἶναι (Arist. *GC* 336 b 29, where τὸ εἶναι stands for eternal being, as opposed to continuous generation), because as far as Th. is concerned (i) being without form too is veritable being, and (ii) indeterminate being (as well as the less determinate forms of being) constitutes an essential part of the cosmos.

Th. might seem to be drawing an ontological consequence from Aristotle's conception of 'focal meaning' according to which εἶναι appplies to τὸ μὴ ὂν too (διὸ καὶ τὸ μὴ ὂν εἶναι μὴ ὄν φαμεν, *Met.* 1003 b 10). In this respect Th. here seems to be moving away from the Parmenidean dilemma one step further than his predecessor chose to do.

For μετάβασις see *ad* 7 b 5-8, pp. 326 ff.; here again, the term denotes not so much an actual instance of change as an *analysis* of the process, as is confirmed by the phrase τάχ' ἂν ... εἴη.

While it is granted that the change may be for the better, on the other hand (δ(έ))—and this involves, it is implied, a paradox (**οὐθὲν ἂν ἧττον**) in any case to those who emphasize the change for the better—in respect of matter **τὸ εἶναι** ('being') truly applies (**ἀληθὲς ὑπάρχοι**: "exists as real", "truly exists"). Noticeably, in this context (τὸ εἶναι ...) ἀληθὲς ὑπάρχοι (stating explicitly the implications of ὂν μέν in 8 a 11) enters into a relation of contrast with δυνάμει (ὄν).

κατ' αὐτήν is easily interpreted as κατὰ τὴν ὕλην, the opposite of μορφή merging into the entity as a whole in the second part of the disjunction (τῷ μορφοῦσθαι; see 8 a 12-4). For κατά τι indicating the range within which something applies, compare

Arist. *Top.* 109 a 19-20 οὐδὲν γὰρ τούτων ἐνδέχεται κατά τι ὑπάρχειν ἢ μὴ ὑπάρχειν, ἀλλ' ἁπλῶς ὑπάρχειν ἢ μὴ ὑπάρχειν.[1]

Pol. 1280 a 22-5 οἱ μὲν γὰρ ἂν κατά τι ἄνισοι ὦσιν, οἷον χρήμασιν, ὅλως οἴονται ἄνισοι εἶναι, οἱ δ' ἂν κατά τι ἴσοι, οἷον ἐλευθερίᾳ, ὅλως ἴσοι.[2]

The variant reading καθ' αὑτήν would imply that τῇ ὕλῃ is to be supplemented with ὑπάρχοι, the dative being the normal case with this verb both in a logical context (e.g. 107B.8-9 FHS&G συνάγεται γὰρ τὸ Α τῷ Γ παντὶ ὑπάρχον, ᾧ ἔκειτο τινὶ μὴ ὑπάρχειν) and in a less technical use: e.g. *Sens.* 46 ἴσως γὰρ καὶ ἀέρα τοιοῦτον καὶ κρᾶσιν καὶ συμμετρίαν ἐνδέχεται πανταχοῦ καὶ πᾶσιν ὑπάρχειν: also *HP* I.1.11 quoted p. 363 above.

καθ' αὑτήν[3] would be quite apposite since the point at issue is precisely that 'being' applies in the case of matter *as such*, but should be rejected as the *lectio facilior.*

τῆς ὕλης is also to be supplied with **ὑπαρχούσης**; Th. parenthetically adds that it is not possible for things even to be generated if matter does not exist.

Compare, in the sphere of the crafts,

Arist. *PA* 639 b 27 ἀνάγκη δὲ τοιάνδε τὴν ὕλην ὑπάρξαι εἰ ἔσται οἰκία ἢ ἄλλο τι τέλος.

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[1] "For none of these attributes can possibly belong or not belong in part; they must either belong or not belong absolutely", *RevOT.*

[2] "For the one party, if they are unequal in one respect, for example wealth, consider themselves to be unequal in all; and the other party, if they are equal in one respect, for example free birth, consider themselves to be equal in all.", *RevOT.*

[3] Cp. τῷ δὲ ἰσοσκελεῖ καθ' αὑτὸ μὲν ὑπάρχει (sc. τὸ τὰς τρεῖς γωνίας δύο ὀρθαῖς ἴσας ἔχειν), οὐκέτι δὲ ᾗ αὐτό, 116.6-7 FHS&G.

The construction of (οὐ ... ἄν ...) **γίνοιτο** (the potential optative with negation signifying an emphatic denial of the possibility) is not quite clear. It may be interpreted either absolutely, as an equivalent of *οὐ γὰρ οὐδὲ γένεσις ἄν εἴη ("car il n'y aurait pas même génération", L-M; cp. also TRICOT, REALE), or with τὰ ὄντα as the implied subject (see ἡ γένεσις ἢ οὐσία γ' *αὐτῶν* 8 a 12-3, with note *ad loc.*).

The latter would strictly speaking involve a paradox; but if the non-technical use of τὰ ὄντα ("things": the very issue of this chapter is the question where in the case of τὰ ὄντα 'being' comes in) is taken into account, this paradox would not be conclusive. Perhaps this is merely a translator's problem: cp. Arist. *Met.* 1032 b 31 ἀδύνατον γενέσθαι εἰ μηδὲν προϋπάρχοι "generation would be impossible" TREDENNICK; "it is impossible that anything should be produced" *RevOT.*

However this may be, **οὐδέ** conveys that if things cannot be generated (c.q. γένεσις is impossible), οὐσία is out of the question *a fortiori.*

ἀλλὰ τὸ μήτε τόδε κ.τ.λ. modifies τὸ ... εἶναι in 8 a 15: the 'being' which may be said truly to exist in respect of matter is not being according to any of the categories,[1] i.e. it is not this particular thing (**τόδε**: a 'this'; connected with οὐσία in e.g. Arist. *Met.* 1038 b 24), nor (even) of a certain qualitity (**ποιόν**), nor (even) of a certain quantity (**ποσόν**); compare

Arist. *Met.* 1029 a 20-6 λέγω δ' *ὕλην ἣ καθ' αὑτὴν μήτε τὶ μήτε ποσὸν μήτε ἄλλο μηδὲν λέγεται οἷς ὥρισται τὸ ὄν.* ἔστι γάρ τι καθ' οὗ κατηγορεῖται τούτων ἕκαστον, ᾧ τὸ εἶναι ἕτερον καὶ τῶν κατηγοριῶν ἑκάστῃ·[2] τὰ μὲν γὰρ ἄλλα τῆς οὐσίας κατηγορεῖται, αὕτη δὲ τῆς ὕλης. ὥστε *τὸ ἔσχατον καθ' αὑτὸ οὔτε τὶ οὔτε ποσὸν οὔτε ἄλλο οὐδέν ἐστιν*· οὐδὲ δὴ αἱ ἀποφάσεις·[3] καὶ γὰρ αὗται ὑπάρξουσι κατὰ συμβεβηκός.—Aristotle goes on to show that ὕλη nevertheless cannot be οὐσία, for the reason that τὸ χωριστόν and τὸ τόδε τι, which are characteristic of οὐσία, are lacking.

Setting aside the difficulties in interpretation of the Aristotelian passage—where Aristotle is refuting the view that matter is substance because it re-

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[1] See e.g. Arist. *Met.* 1089 a 7-9 τὸ μὲν γὰρ (sc. ὄν) οὐσίαν σημαίνει, τὸ δ' ὅτι ποιόν, τὸ δ' ὅτι ποσόν, καὶ τὰς ἄλλας δὴ κατηγορίας; also 1089 a 16-9 πολλαχῶς γὰρ τὸ μὴ ὄν, ἐπειδὴ καὶ τὸ ὄν· καὶ τὸ μὲν μὴ ἄνθρωπον ⟨εἶναι⟩ σημαίνει τὸ μὴ εἶναι τοδί, τὸ δὲ μὴ εὐθὺ τὸ μὴ εἶναι τοιονδί, τὸ δὲ μὴ τρίπηχυ τὸ μὴ εἶναι τοσονδί, and 995 b 35 λέγω δὲ τὸ σύνολον, ὅταν κατηγορηθῇ τι τῆς ὕλης.

[2] "so that its being is different from that of each of the predicates", *RevOT.*

[3] "'nor will the ultimate subject *per se* be the negations of these', i.e. οὐ τί, οὐ ποσόν &c. This is difficult; one would suppose that it was just the essence of matter, as Aristotle conceives it, to be not τί, not ποσόν, &c. But he seems here to feel that to say even this of it is to assign it a character, while its character is to have no character.", Ross II.165 *ad loc.*

mains after the 'ἀφαίρεσις' of everything else—,[1] it seems clear that Th.' motive for the characterization of matter in terms of what-it-is-not is simply complementary to the assertion that τὸ εἶναι truly applies in respect to it. **ὡς** ἀόριστον τοῖς εἴδεσιν, δύναμιν δέ τιν' ἔχον summarizes the gist of τὸ μήτε τόδε μήτε ποιὸν μήτε ποσόν as non-being according to the figures of predication, and presumably presents the implications of μήτε ποιόν in particular: this 'being' ascribed to matter is indeterminate in kind (**ἀόριστον τοῖς εἴδεσιν**).[2] For the general, non-technical use of εἶδος, cp. 10 b 23 (with commentary); the plural seems to indicate that the indeterminateness applies at all levels of specification—possibly even below the level of analysis according to the categories: it is neither this kind of element (earth, air, water, fire),[3] nor flesh, blood, bone (&c.); nor fruit, hand, face (&c.); nor stone, plant, animal; nor aquatic, terrene, male, female, &c.

This indeterminate being is said, on the other hand (**δέ**), to have some capacity (**δύναμιν ... τιν' ἔχον**). This, of course, allows of more than one interpretation, depending on one's interpretation of the term δύναμις.[4] If we let ourselves be guided by the analogy of the crafts—as the presentation of this alternative in 8 a 10 ff. strongly suggests—, δύναμις will be understood as a capacity of being formed;[5] see

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[1] Arist. *Met.* 1029 a 16-9 ἀλλὰ μὴν ἀφαιρουμένου μήκους καὶ πλάτους καὶ βάθους οὐδὲν ὁρῶμεν ὑπολειπόμενον, πλὴν εἴ τί ἐστι τὸ ὁριζόμενον ὑπὸ τούτων, ὥστε τὴν ὕλην ἀνάγκη φαίνεσθαι μόνην οὐσίαν οὕτω σκοπουμένοις. See also *ad* καὶ εἴ τις ὁμοιότης ἄλλη, 8 a 20.

[2] Cp. ὡρισμένην τιν' ... φύσιν ... καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν 10 b 21-3 with commentary, pp. 522 ff. below.

[3] The so-called simple bodies being composite themselves, if this is what Th. is saying in *Ign.* 8: φαίνεται γὰρ οὕτω λαμβάνουσι (for those who distinguish heat from fire) τὸ θερμὸν καὶ τὸ ψυχρὸν ὥσπερ πάθη τινῶν εἶναι καὶ οὐκ ἀρχαὶ καὶ δυνάμεις, ἅμα δὲ καὶ ἡ τῶν ἁπλῶν λεγομένων φύσις μικτή τις καὶ ἐνυπαρχοῦσα ἀλλήλοις. ὥσπερ γὰρ οὐδὲ τὸ πῦρ ἄνευ ἀέρος ἢ ὑγροῦ τινος καὶ γεώδους εἶναι δυνατόν, οὕτως οὐδὲ τὸ ὑγρὸν ἄνευ πυρὸς οὐδὲ τὴν γῆν ἄνευ ὑγροῦ.— where *τὸ ὑγρὸν* ἄνευ πυρός is anomalous at first sight, but might be explained by the fact that in this particular context the criticism is precisely that no disctinction is made between τὸ ὑγρόν (as a δύναμις) and the element (i.c. τὸ ὕδωρ).—In the sequel (*Ign.* 9) Th. dismisses the question concerning the non-mixed <entities> for treatment in another, more weighty (i.e., fundamental) study.

Cp. also (without the implication that the so-called elements are composite as well) Arist. *PA* 646 a 13-7 τριῶν δ' οὐσῶν τῶν συνθέσεων πρώτην μὲν ἄν τις θείη τὴν ἐκ τῶν καλουμένων ὑπό τινων στοιχείων, οἷον γῆς, ἀέρος, ὕδατος, πυρός. ἔτι δὲ βέλτιον ἴσως ἐκ τῶν δυνάμεων λέγειν, καὶ τούτων οὐκ ἐξ ἁπασῶν, ἀλλ' ὥσπερ ἐν ἑτέροις εἴρηται καὶ πρότερον· ὑγρὸν γὰρ καὶ ξηρὸν καὶ θερμὸν καὶ ψυχρὸν ὕλη τῶν συνθέτων σωμάτων ἐστίν, ... In Arist. *GC* II.3 (330 a 30 ff.) the στοιχεῖα are said to be συζεύξεις of hot, cold, dry and moist.

[4] See SCHNAYDER (1973).

[5] One may compare 303.27-8 F. (= Alb. Magn. *An. Post.* 1.1.3), which ascribes to Th. the opinion that "quod intellectus receptivus sit formae abstractae, sicut materia receptiva est formae".

Lap. 5 θαυμασιωτάτη δὲ καὶ μεγίστη δύναμις, εἴπερ ἀληθές, ἡ τῶν τικτόντων· γνωριμωτέρα δὲ τούτων καὶ ἐν πλείοσιν *ἡ κατὰ τὰς ἐργασίας*· γλυπτοὶ (can be carved) γὰρ ἔνιοι καὶ τορνευτοὶ (can be turned on a lathe) καὶ πριστοί (can be sawn), ...

If on the other hand the idea would be that matter is endowed with an active power, this might refer to the generative power of heat in particular: compare the ἀπορία in *Ign.* 6, to the effect that if fire and heat do not come about through the agency of the sun, fire and heat would be in a substrate—which is absurd in the case of an ἀρχή:

εἰ δὲ μή ἐστι πῦρ μηδὲ πυρὸς φῶς (sc. ὁ ἥλιος), αὐτὸ μὲν τοῦτον θαυμαστὸν καὶ λόγου δεῖται. εἰ δὲ μήθ' ὑπὸ τούτου καὶ διὰ τοῦτον ἡ θερμότης, ἐκεῖνο δὲ φανερόν, ὡς ἐν ὑποκειμένῳ τινὶ καὶ τὸ πῦρ καὶ τὸ θερμόν. ἄτοπον δὲ καὶ τοῦτο πάλιν, εἰ ἡ ἀρχὴ καὶ τὸ πρῶτον ἐν ὑποκειμένῳ· *τὸ γὰρ θερμὸν καὶ ἡ τούτου δύναμις ἀρχή.*

In that case Th. in the present passage would be taking for granted this 'absurdity',[1] by implying that this δύναμις, though being an ἀρχή, 'is in a substrate'; for he would then assert that the 'being' involved in matter, without having a particular quality, *involves* heat as a capacity (which, the idea seems to be, may be stimulated[2] into developing a particular form). It is to be noted that in δύναμιν δέ τιν' ἔχον Th. is not necessarily implying that the matter of an entity contains a capacity *for a particular realization* (as in the case of the Aristotelian concept of τὸ δυνάμει ὄν)[3]—according to the present argument this rather comes in with τὸ μορφοῦσθαι κατὰ τοὺς λόγους.

It should furthermore be noted that in the case of an 'active' power too Th. does not imply that the matter itself is of secondary (if any) importance, contributing nothing to the product generated, as contrasted with Aristotle's conception of semen (which is formulated in similar terms):

Arist. *GA* 726 b 17-21 καὶ οἷον ἐκείνων ἕκαστον ἐνεργείᾳ, τοιοῦτον τὸ σπέρμα δυνάμει, ἢ κατὰ τὸν ὄγκον τὸν ἑαυτοῦ, ἢ *ἔχει τινὰ δύναμιν ἐν ἑαυτῷ* (τοῦτο γὰρ οὔπω δῆλον ἡμῖν ἐκ τῶν διωρισμένων, πότερον τὸ σῶμα τοῦ σπέρματός

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[1] Which might be considered as a manifestation too, on the most basic level of being, of the idea that a combination of opposites is invariably involved (in this case of active and passive).

[2] Cp. *Od.* 63 ὅλως δὲ πάντα κινεῖται τὰ φλοιόριζα (plants the roots of which are in layers) καὶ σαρκόριζα μὴ ἀπεξηραμμένα κατὰ τὰς βλαστικὰς ὥρας· *ἡ γὰρ ἐνυπάρχουσα δύναμις ἐν αὐτοῖς κινεῖται.* Also note *ad* ἀγόμενον εἰς ἐνέργειαν, 8 a 11.

[3] "Matter as potentiality contains a reference to its *specific determinability*, by which I mean its capacity not just to receive some form or other, but its intrinsic property of being the sort of matter which is able to receive precisely the sort of form under consideration. And this reference is not present when we think of matter as pure substrate.", PAGE (1985) 78.

ἐστι τὸ αἴτιον τῆς γενέσεως, ἢ *ἔχει τινὰ ἕξιν καὶ ἀρχὴν κινήσεως γεννητικήν*)·

and Aristotle's choice for the latter possibility

ibid. 729 a 34 – b 9 ἅμα δ' ἐκ τούτων φανερόν, περὶ ὧν ἐχόμενόν ἐστιν ἐπισκέψασθαι, πῶς ποτε συμβάλλεται εἰς τὴν γένεσιν τὸ ἄρρεν, καὶ πῶς αἴτιόν ἐστι τοῦ γιγνομένου τὸ σπέρμα τὸ ἀπὸ τοῦ ἄρρενος, πότερον ὡς ἐνυπάρχον καὶ μόριον ὂν εὐθὺς τοῦ γιγνομένου σώματος, μιγνύμενον τῇ ὕλῃ τῇ παρὰ τοῦ θήλεος, ἢ τὸ μὲν σῶμα οὐθὲν κοινωνεῖ τοῦ σπέρματος, *ἡ δ' ἐν αὐτῷ δύναμις καὶ κίνησις*· αὕτη μὲν γάρ ἐστιν ἡ ποιοῦσα, τὸ δὲ συνιστάμενον καὶ λαμβάνον τὴν μορφὴν τὸ τοῦ ἐν τῷ θήλει περιττώματος λοιπόν. κατά τε δὴ τὸν λόγον οὕτω φαίνεται καὶ ἐπὶ τῶν ἔργων.

—on which see e.g. VERDENIUS (1983), esp. 111 f. See also next note.

8 a 19-20 ὅλως δὲ ... ἄλλη.

ὅλως δέ "in principium enunciationum positum legitur ... ubi ad proportionem vel rationem magis generalem transitur", BONITZ 505 b 55 ff. s.v. Compare

Ign. 12 συνηθροισμένον δὲ πᾶν (presumably sc. fire) ἰσχυρόν (διὸ καὶ τὸ ἐν τοῖς λαμπτῆρσι φῶς ἐπὶ πλέον φαίνεται). ὅλως δὲ συνεστηκυῖα καὶ ἀθρόος ἡ δύναμις ἅπαντος ἰσχυροτέρα καθάπερ τοῦ βάρους· ...
Od. 63 ὅλως δὲ πάντα κινεῖται τὰ φλοιόριζα καὶ σαρκόριζα μὴ ἀπεξηραμμένα κατὰ τὰς βλαστητικὰς ὥρας· ...
HP IV.14.6 ὅλως δὲ πᾶν τὸ παρὰ φύσιν ἐπικίνδυνον.
[Th.] *Sign.* 17 ἐὰν ἱέραξ ἐπὶ δένδρου καθεζόμενος καὶ εἴσω εἰσπετόμενος φθειρίζηται, ὕδωρ σημαίνει. καὶ θέρους ὅταν πολλοὶ ἀθρόοι φανῶσιν ὄρνιθες ... ὕδωρ σημαίνουσιν· ... . ὅλως δὲ ὄρνιθες καὶ ἀλεκτρύονες φθειριζόμενοι ὑδατικὸν σημεῖον, καὶ ὅταν μιμῶνται ὕδωρ ὡς ὗον.

Th. concludes his analysis of this problem by stating that, in general, the situation should be grasped by analogy (**κατ' ἀναλογίαν**)—that is to say, presumably, that an analogy is indispensable not only in the case of the second alternative discussed here, but also in that of any other conceivable conception of matter. That an analogy (or another comparison) is the only possible method in this case was suggested not only by ἀόριστον ... καθάπερ ἐν ταῖς τέχναις, 8 a 12 (and by the repetition of ἀόριστον in 8 a 18), but also by the assertion that matter is indeterminate in every respect, and—owing to the parallelism between being and knowledge—thus cannot be determined in any other way. (Cp. 9 a 4-9.)

The object implied by **ληπτέον** could be either (1) 'the division of reality into matter and shape' (see *ad* 8 a 9-10), or (2), in accordance with the drift

of the preceding discussion, 'the ontological status of matter', or (3) 'the question concerning <either one of these>' (*τὸ τοῦ μερισμοῦ κ.τ.λ., *τὸ τῆς ὕλης, as it were). Compare e.g.

> *HP* I.1.4 ὅλως δέ, καθάπερ εἴπομεν, οὐδὲ πάντα ὁμοίως καὶ ἐπὶ τῶν ζῴων ληπτέον.
>
> I.1.7 ὅλως δὲ τὸ τῆς θέσεως ἐν τούτοις καὶ τοῖς φύλλοις καὶ ἐν τοῖς βλαστοῖς ληπτέον.

ἐπὶ τὰς τέχνας[1] seems to involve an ellipse—of μεταβαίνουσιν, for instance (cp. ὅταν δὲ ἐπ' αὐτὰ τὰ ἄκρα καὶ πρῶτα μεταβαίνωμεν 9 b 10-1); or, for that matter, of ἀναφέρουσιν:[2] cp. Plato *Phaedo* 76 D 7 – E 1 (εἰ ...) ἐπὶ ταύτην (sc. τὴν οὐσίαν, i.e. the world of recollection) τὰ ἐκ τῶν αἰσθήσεων πάντα ἀναφέρομεν, ... ; S.E. *Adv. Math.* VIII.10 κατ' ἀναφορὰν τὴν ὡς ἐπὶ τὰ παρακείμενα τούτοις νοητά; also the frequent use of the formula ἀναφέρεται ἐπὶ (τὸ ἄρρεν, τὸ θῆλυ, τοὺς πιθήκους, τοὺς λύκους, κ.τ.λ., presenting an example) in Ps.-Arist. *Physiogn.* VI (810 a 14 ff.); ἐπειδὴ γὰρ τὰ ὁρώμενα ἐπὶ τῶν σωμάτων λέγεται ἀναφέρεσθαι ἐπὶ τὰς ὁμοιότητας τάς τε ἀπὸ τῶν ζῴων καὶ τὰς ἀπὸ τῶν πράξεων γινομένας, ... *ibid.* 809 a 4 ff.

> It seems at any rate to be unnecessary to emend the text, as USENER tried to do. USENER's suggestion ἀντιτέον (instead of ληπτέον: (1861) 277) appears to make κατ' ἀναλογίαν redundant, and his reading ληπτέον *ἐστὶ* for ἐπί (1890) does not seem to make much sense in the context.
>
> It seems just possible, however, that ἐπὶ τὰς τέχνας was originally written *in margine*—either by Th. himself, as a reminder of a topic to be developed, or by some interpreter demonstrating his understanding of the drift of the remark. But see below.

Th. adds that any other kind of comparison would be welcome too. **ὁμοιότης** is the broader term of the two, comprising ἀναλογία (see *ad* 4 b 12-3). As a result the restriction ἐπὶ τὰς τέχνας is unnecessary, or rather it seems to in-

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[1] The use of ἐπί + accusative in combination with κατ' ἀναλογίαν seems to be unparalleled. It even is doubtful whether ἐπί + *genitive* in the following passage should be construed with κατ' ἀναλογίαν at all: *HP* I.1.5 οὐ δεῖ δὲ οὐδὲ τοῦτο λανθάνειν, εἴ τι κατ' ἀναλογίαν θεωρητέον, ὥσπερ *ἐπὶ τῶν ζῴων* ("for instance, an analogy presented by animals" tr. HORT), τὴν ἀναφορὰν ποιουμένους δηλονότι πρὸς τὰ ἐμφερέστατα καὶ τελειότατα, καὶ ἁπλῶς δὲ ὅσα τῶν ἐν φυτοῖς ἀφομοιωτέον τῷ ἐν τοῖς ζῴοις, ὡς ἄν τις τῷ γ' ἀνάλογον ἀφομοιοῖ.—which, I think, would be more properly rendered by "as in the case of animals" ("comme pour les animaux", AMIGUES): cp. *CP* IV.4.11 ὅθεν καὶ τοῦτο ἂν εἴη φανερὸν εἴ τις ἀκολουθήσει τῇ ἀναλογίᾳ· διότι τῇ τῶν σπερμάτων ἀλλοιώσει, καὶ οὐ τῇ τῆς χλόης μεταβολῇ· καὶ γὰρ ἐπὶ τῶν ζῴων οὕτω γίνεται. ("the transmutation is by alteration of the seed and not by mutation of the blade, this being also the way in which the change occurs in animals", tr. EINARSON/LINK) and *HP* I.1.4, *ad* ὅλως δέ above.

[2] Or, τὴν ἀναφορὰν ποιουμένοις: cp. (with πρός τι) *HP* I.1.5 quoted in the preceding note.

volve a conflation (of, on the one hand, 'by analogy with the crafts, or by some other analogy' and on the other, 'by analogy, or some other comparison'). However, even taken together with the ellipsis apparently involved in the use of the preposition (see above), this conflation does not justify deleting ἐπὶ τὰς τέχνας as an addition *in margine*.

The idiomatic phrase **καὶ εἴ τις ... ἄλλη** serves to cover all (actual or potential) instances; compare

111E.9-12 FHS&G (= Alex. Aphr. *In An. Pr.* 50 a 39) παρὰ τοὺς εἰρημένους (sc. λόγους) εἶεν ἂν καὶ οἱ ἐξ ἀναλογίας καὶ οὓς λέγουσι "κατὰ ποιότητα", τοὺς ἀπὸ τοῦ μᾶλλον καὶ ἧττον καὶ ὁμοίως, *καὶ εἴ τινες ἄλλαι* τῶν ἐξ ὑποθέσεως διαφοραὶ προτάσεών εἰσι, περὶ ὧν ἐν ἄλλοις εἴρηται.

HP III.5.6 περὶ δὲ τῆς φιλύρας (lime) ἐπισκεπτέον, καὶ εἴ τι ἄλλο καχρυοφόρον (tree producing winter-buds).

HP V.1.1 περὶ δὲ τῆς ὕλης, ποία τε ἐστὶν ἑκάστη, καὶ πόθ' ὡραία τέμνεσθαι ..., καὶ εἴ τι ἄλλο τῆς τοιαύτης ἱστορίας ἔχεται, πειρατέον ὁμοίως εἰπεῖν.

The possibility of grasping the ontological status of matter by means of some other comparison does not seem to be a merely theoretical one:

(i) Here again, as in I.4, the method of τῷ μᾶλλον καὶ ἧττον comes to mind—as contrasted with the manner of conceiving the first principle in the earlier passage, in this case rather τῷ ἧττον than τῷ μᾶλλον (cp. the method of grasping matter by means of the ἀφαίρεσις of everything else in Arist., *Met.* 1029 a 17 ff., *ad* ἀλλὰ τὸ μήτε τόδε κ.τ.λ., 8 a 17-8). Although in view of δύναμιν δέ τιν' ἔχον this method does not seem to be favoured by Th. either, this does not yield an inconsistency because of the general nature of this conclusion (see *ad* ὅλως δέ, above).

(ii) In the case of an 'active' interpretation of δύναμις in 8 a 19 (see preceding note), the 'being' of matter might also be elucidated by means of yet another comparison,[1] that with semen (ὁ ὄγκος or τὸ σῶμα τοῦ σπέρματος: see Arist., *GA* 726 b 17 ff.; 729 a 34 ff., quoted pp. 372-3 above), which also is matter endowed with some power.

(iii) In the case of a 'passive' interpretation of δύναμις too, the generation of animals would provide a point of comparison in that, according to Alb. Magn. (*De animalibus*), both Aristotle and Th. attributed a "virtus informativa, sive quod melius dicitur informabilis" to the 'seed of the female' ("spermati feminae"): see 376A.3-7 FHS&G.[2] The distinction between active and passive seems to vanish altogether when Th. reportedly ascribes to

[1] Rather than an analogy, I would think, in view of the fact that the phenomenon of semen would actually be one manifestation of the mode of being of matter in natural processes.

[2] Also 376B and C, 303 FHS&G.

the womb a "calor vitalis" (377.19 ff. FHS&G), which nourishes and fosters the "spiritus formativus" in the seed when activated by it.

If, apart from posing a question, Th. is suggesting a possible answer here, it seems to consist in abandoning the conception of τὸ δυνάμει ὄν as 'proximate' matter; to judge by the present argument, Th.' motive seems to be that this solution of the problem of generation obviates the question of the ontological status of matter as such. It seems that the alternative (and, more 'physical') conception of matter as a veritable ὄν, having some δύναμις, which apparently was not foreign to Aristotle's ideas about the function of matter especially in the generation of animals, provided Th. with a promising paradigm for grasping the nature of matter as a principle.

CHAPTER SEVEN

VII.1 (8 a 21 – b 4): *The question* why *the cosmos consists of contraries, and why the worse has a share in it which equals that of the better—or, depending on what one regards as 'worse', why the great majority of things is 'worse'—is an instance of asking for a reason where there is none. Those who complain about the amount of evil in the cosmos fail to recognize that all things in fact* are *good, viz. insofar as being may be predicated of them.*

8 a 21-3 δόξειεν δ' ἂν ... ἐν ἐναντίοις ἐστίν

In this paragraph a difficulty which might be raised is removed as irrelevant, apparently since it is seen as an instance of seeking an explanation where there is none to be given (a situation described in VIII.4 and 5, 9 b 1 ff. and 9 b 16 ff.). This is done by presenting the state of affairs as a paradox which simply has to be accepted.

For the introduction of this potential **ἀπορία**, see *ad* 5 b 10-1. The essential coexistence of contraries is also posited in 11 b 11-2; in the present context it is stated as a matter beyond dispute by implication, because the grounds on which it is based are being asked for. The axiom here applies to **ἡ φύσις καὶ ἡ ὅλη δ' οὐσία τοῦ παντός**, that is to say, to 'nature', or, apparently, 'the physical world' and also—δέ[1] indicating that καὶ ἡ ὅλη ... οὐσία really is an addition and not merely explicative of ἡ φύσις—, more comprehensively, to the (mode of) being of the cosmic whole (cp. 11 b 25-6 καὶ ἐν τῇ φύσει καὶ ἐν τῇ τοῦ σύμπαντος οὐσίᾳ; also Arist. *Met.* 1076 a 1 ἐπεισοδιώδη τὴν τοῦ παντὸς οὐσίαν ποιοῦσιν).[2] In this case, then, οὐσία is equivalent to τὸ τί ἐστι,[3] i.e. 'being' or essence: compare

> *HP* I.14.3 αἱ δὲ τοιαῦται (διαφοραὶ) τῆς ὅλης οὐσίας φαίνονται·[4] δῆλον ὅτι τὰ μὲν ἥμερα τὰ δ' ἄγρια, καὶ τὰ μὲν κάρπιμα τὰ δ' ἄκαρπα, καὶ ἀείφυλλα καὶ φυλλόβολα, καθάπερ ἐλέχθη, τὰ δ' ὅλως ἄφυλλα· κ.τ.λ.
>
> 149.7 FHS&G (...) τούτων τάξις τις καὶ θέσις τῶν μερῶν ἐστι πρὸς τὴν ὅλην οὐσίαν.

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[1] Cp. καὶ τὸ ὅλον δέ 4 a 8.

[2] Contrast the use of ἡ φύσις as a near equivalent of ἡ οὐσία, in e.g. 4 a 17; also εἰς τὴν τοῦ παντὸς φύσιν 8 b 8.

[3] Instead of being coextensive with τὸ πᾶν (as is the case in e.g. ἡ πᾶσα οὐσία (e.g. 4 a 13, 7 a 9-10) or ἡ ὅλη οὐσία (11 a 22).

[4] "les différences suivantes sont manifestement inhérentes à la substance globale <des végétaux>", tr. AMIGUES.

For the idea, compare

Heracl. A 22 DK (= Arist. *EE* 1235 a 25) καὶ Ἡ. ἐπιτιμᾷ τῷ ποιήσαντι 'ὡς ἔρις ἔκ τε θεῶν καὶ ἀνθρώπων ἀπόλοιτο'· οὐ γὰρ ἂν εἶναι ἁρμονίαν μὴ ὄντος ὀξέος καὶ βαρέος οὐδὲ τὰ ζῷα ἄνευ θήλεος καὶ ἄρρενος ἐναντίων ὄντων.

Ps.-Arist. *De Mundo* 396 a 33 – b 22 (Heracl. B 10 DK) καίτοι γέ τις ἐθαύμασε πῶς ποτέ, εἰ ἐκ τῶν ἐναντίων ἀρχῶν συνέστηκεν ὁ κόσμος, λέγω δὴ ξηρῶν τε καὶ ὑγρῶν, ψυχρῶν τε καὶ θερμῶν, οὐ πάλαι διέφθαρται καὶ ἀπόλωλεν, ὡς κἂν εἰ πόλιν τινὲς θαυμάζοιεν, ὅπως διαμένει συνεστηκυῖα ἐκ τῶν ἐναντίων ἐθνῶν, πενήτων λέγω καὶ πλουσίων, νέων γερόντων, ἀσθενῶν ἰσχυρῶν, πονηρῶν χρηστῶν. ἀγνοοῦσι δὲ ὅτι τοῦτ' ἦν πολιτικῆς ὁμονοίας τὸ θαυμασιώτατον, λέγω δὲ ὅτι ἐκ πολλῶν μίαν καὶ ὁμοίαν ἐξ ἀνομοίων ἀποτελεῖν διάθεσιν, ὑποδεχομένην πᾶσαν καὶ φύσιν καὶ τυχήν.

ἴσως δὲ καὶ τῶν ἐναντίων ἡ φύσις γλίχεται καὶ ἐκ τούτων ἀποτελεῖ τὸ σύμφωνον, οὐκ ἐκ τῶν ὁμοίων, ὥσπερ ἀμέλει τὸ ἄρρεν συνήγαγε πρὸς τὸ θῆλυ καὶ οὐχ ἑκάτερον πρὸς τὸ ὁμόφυλον, καὶ τὴν πρώτην ὁμόνοιαν διὰ τῶν ἐναντίων συνῆψεν, οὐ διὰ τῶν ὁμοίων.

ἔοικε δὲ καὶ ἡ τέχνη τὴν φύσιν μιμουμένη τοῦτο ποιεῖν. ζωγραφία μὲν γὰρ λευκῶν τε καὶ μελάνων, ὠχρῶν τε καὶ ἐρυθρῶν, χρωμάτων ἐγκερασαμένη φύσεις τὰς εἰκόνας τοῖς προηγουμένοις ἀπετέλεσε συμφώνους, μουσικὴ δὲ ὀξεῖς ἅμα καὶ βαρεῖς, μακρούς τε καὶ βραχεῖς φθόγγους μίξασα ἐν διαφόροις φωναῖς μίαν ἀπέτελεσεν ἁρμονίαν, γραμματικὴ δὲ ἐκ φωνηέντων καὶ ἀφώνων γραμμάτων κρᾶσιν ποιησαμένη τὴν ὅλην τέχνην ἀπ' αὐτῶν συνεστήσατο. ταὐτὸ δὲ τοῦτο ἦν καὶ τὸ παρὰ τῷ σκοτεινῷ λεγόμενον Ἡρακλείτῳ· "συνάψιες ὅλα καὶ οὐχι ὅλα, συμφερόμενον καὶ διαφερόμενον, συνᾷδον διᾷδον, καὶ ἐκ πάντων ἓν καὶ ἐκ ἑνὸς πάντα".

(Cp. also Heracl. B 67, 80, 88 DK.)

The issue of contraries being essential for the being of the cosmos as a whole seems to brought up here as a result of the discussion of the problems in the chapters immediately preceding. There the most plausible conception was found to be that of the cosmos essentially involving (i) both matter and shape (Ch. IV, VI) and (ii) both movement and rest (Ch. V)—the contribution to the cosmic whole of both members of each of these pairs being equally essential.

It cannot at any rate be maintained that Th. here "s' attaque à la théorie pythagoricienne des contraires qu'(Aristote) avait déjà critiquée dans la *Métaph.*", as Tricot (*ad loc.*) believes—if only because Th. is not attacking any theory at all. As for Aristotle, he, while finding fault with those who assume a set (or, sets)[5] of opposite principles and taking care to exclude contrariety from the first prin-

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[1] Tricot refers to Arist. *Met.* 986 a 22 ff., where Aristotle discusses τὰς ἀρχὰς δέκα ... τὰς κατὰ συστοιχίαν λεγομένας, such as πέρας ἄπειρον, ἓν πλῆθος, ἠρεμοῦν κινούμενον, ἀγαθὸν κακόν.

ciple,[1] in the *Physics* finds support in the ideas of his predecessors for the essential role of contraries as ἀρχαί in the domain of physical nature:

Arist. *Phys.* 188 a 26 ff. ὅτι μὲν οὖν τἀναντία πως πάντες ποιοῦσι τὰς ἀρχάς, δῆλον. καὶ τοῦτο εὐλόγως· δεῖ γὰρ τὰς ἀρχὰς μήτε ἐξ ἀλλήλων εἶναι μήτε ἐξ ἄλλων, καὶ ἐκ τούτων πάντα· τοῖς δ' ἐναντίοις τοῖς πρώτοις ὑπάρχει ταῦτα —διὰ μὲν τὸ πρῶτα εἶναι μὴ ἐξ ἄλλων, διὰ δὲ τὸ ἐναντία μὴ ἐξ ἀλλήλων. (...) 188 b 21 ff. εἰ τοίνυν τοῦτ' ἔστιν ἀληθές, ἅπαν ἂν γίγνοιτο τὸ γιγνόμενον καὶ φθείροιτο τὸ φθειρόμενον ἢ ἐξ ἐναντίων ἢ εἰς ἐναντία καὶ τὰ τούτων μεταξύ. τὰ δὲ μεταξὺ ἐκ τῶν ἐναντίων ἐστίν (οἷον χρώματα ἐκ λευκοῦ καὶ μέλανος)· ὥστε πάντ' ἂν εἴη τὰ φύσει γιγνόμενα ἢ ἐναντία ἢ ἐξ ἐναντίων.

μέχρι μὲν οὖν ἐπὶ τοσοῦτον σχεδὸν συνηκολουθήκασι καὶ τῶν ἄλλων οἱ πλεῖστοι, καθάπερ εἴπομεν πρότερον· πάντες γὰρ τὰ στοιχεῖα καὶ τὰς ὑπ' αὐτῶν καλουμένας ἀρχάς, καίπερ ἄνευ λόγου τιθέντες, ὅμως τἀναντία λέγουσιν, *ὥσπερ ὑπ' αὐτῆς τῆς ἀληθείας ἀναγκασθέντες*. διαφέρουσι δ' ἀλλήλων ... (189 a 9-10) *ὅτι μὲν οὖν ἐναντίας δεῖ τὰς ἀρχὰς εἶναι φανερόν.*

By way of parenthesis (**εἰ μὴ ἄρα** ...)[2] Th. questions the grounds for asking *why* this is so (**τί δή ποτε**), i.e. *why* nature and the whole being of the universe consist in contaries. The ἀπορία posited here may be rather a 'going too far' in asking (**περιεργίαν τοῦ ζητεῖν**: the prefix περι- expressing "a going over or beyond",[3] i.c. in what one is doing);[4] compare

Char. XIII.1-2 ἀμέλει περιεργία δόξειεν ἂν εἶναι προσποίησίς τις λόγων καὶ πράξεων μετ' εὐνοίας ("Officiousness would seem to be, in fact, a well-meaning presumption in word or deed", tr. SANDYS).[5]

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[1] See Arist. *Met.* 1075 b 20-4, the other passage referred to by TRICOT: καὶ τοῖς μὲν ἄλλοις ἀνάγκη τῇ σοφίᾳ καὶ τῇ τιμιωτάτῃ ἐπιστήμῃ εἶναί τι ἐναντίον, ἡμῖν δ' οὔ. οὐ γάρ ἐστιν ἐναντίον τῷ πρώτῳ οὐδέν· πάντα γὰρ ἐναντία ὕλην ἔχει, καὶ δυνάμει ταῦτα ἔστιν· ἡ δὲ ἐναντία ἄγνοια εἰς τὸ ἐναντίον, τῷ δὲ πρώτῳ ἐναντίον οὐδέν.

[2] For εἰ μὴ ἄρα see *ad* 4 b 10-1, p. 122.

[3] LSJ F.III s.v.

[4] In his will Th. reportedly used the adjective in order to ensure for himself a burial without ceremony: 1.324-6 FHS&G (D.L. V.53) θάψαι δὲ καὶ ἡμᾶς ὅπου ἂν δοκῇ μάλιστα ἁρμόττον εἶναι τοῦ κήπου, μηδὲν περίεργον μήτε περὶ τὴν ταφὴν μήτε περὶ τὸ μνημεῖον ποιοῦντας.

662 FGH&S (= Stob. *Anth.* 2.31.31) has another, otherwise striking example of a wish for restriction: ἀναγκαιοτάτη δ' ἐπὶ γυναίκων ἡ τῶν γραμμάτων δοκεῖ παίδευσις εἶναι καὶ αὐτὴ μέχρι χρησίμου πρὸς οἰκονομίαν· τὸ δ' ἐξακριβούμενον ἐπὶ πλέον ἀργοτέρας τε ποιεῖ πρὸς τἆλλα καὶ λάλους καὶ περιέργους.

[5] (= *Char.* X SANDYS.) "The desire to please, either by rendering an extraordinary service or by performing an ordinary one unusually well, is present in every act ascribed to this character. 'Officiousness' therefore seems to render it better than the more literal 'Overbusiness', which is too harsh. ... the good-will ... is honest, not affected, and the exaggeration is due simply to an error of judgment.", SANDYS *ad loc.*

The genitive τοῦ ζητεῖν[1] specifies what the 'what one is doing' consists in: cp. προσποίησις ... λόγων καὶ πράξεων, *Char.* XIII, above; also the phrases περιουσία τοῦ περιττώματος (Arist. *PA* 688 b 27), περιουσία τῆς τροφῆς (Ps.-Arist. *Probl.* 926 a 14), ἡ περιττότης τῆς ὑγρότητος (Ps.-Arist. *Phyt.* 828 b 28).

In a similar context περιεργία is used in

Ps.-Plato *Sis.* 387 D 7-8 ἀλλὰ μὴ ἐμὴ περιεργία ᾖ καὶ τὸ ἐρωτῆσαί σε περὶ τούτου;

Compare also

Arist. *EE* 1216 b 35-9 διαφέρουσι δ' οἱ λόγοι περὶ ἑκάστην μέθοδον οἵ τε φιλοσόφως λεγόμενοι καὶ οἱ μὴ φιλοσόφως· διόπερ καὶ τῶν πολιτικῶν *οὐ χρὴ νομίζειν περίεργον εἶναι τὴν τοιαύτην θεωρίαν δι' ἧς οὐ μόνον τὸ τί φανερὸν ἀλλὰ καὶ τὸ διὰ τί*· φιλόσοφον γὰρ τὸ τοιοῦτον περὶ ἑκάστην μέθοδον.

HP I.1.4 (ὅλως δὲ καθάπερ εἴπομεν οὐδὲ πάντα ὁμοίως καὶ ἐπὶ τῶν ζῴων ληπτέον. ...) ὥστε ταῦτα μὲν οὕτως ὑποληπτέον οὐ μόνον εἰς τὰ νῦν ἀλλὰ καὶ τῶν μελλόντων χάριν· ὅσα γὰρ μὴ οἷόν τε ἀφομοιοῦν περίεργον τὸ γλίχεσθαι πάντως,[2] ἵνα μὴ καὶ τὴν οἰκείαν ἀποβάλλωμεν θεωρίαν.

Although, as the preceding instance shows, the adjective may be used merely to label an act as needless trouble (see also *CP* III.7.8), the noun seems to characterize the attitude also of the agent. The idea therefore seems to be that in asking why the cosmos as a whole consists in contraries one shows oneself to be unaware of carrying one's professional task (the search for explanations) too far: οἱ γὰρ ἁπάντων ζητοῦντες λόγον ἀναιροῦσιν λόγον, ἅμα δὲ καὶ τὸ εἰδέναι· μᾶλλον δ' ἀληθέστερον εἰπεῖν ὅτι ζητοῦσιν ὧν οὐκ ἔστιν οὐδὲ πέφυκεν (9 b 21-4; see commentary *ad loc.*); cp. *ad* ὑπερβατός τις σοφία, 8 b 9.

Since περιεργίαν τοῦ ζητεῖν as a whole replaces ἀπορίαν, there is no need to worry about the relation of the genitive τοῦ ζητεῖν to ἀπορίαν, as JAEGER does, who conjectures περιεργίαν· τὸ ζητεῖν: "der Genetiv τοῦ ζητεῖν [kann] zwar zur Not zu περιεργίαν, aber niemals zu ἀπορίαν mitbezogen werden, wie es bei der stilistisch und logisch scharfen Antithese notwendig wäre. περιεργία ist absolut gebraucht vom Aufwerfen überflüssiger, transzendenter Fragen, das Theophrast ablehnt. ... Statt zu sagen δόξειεν δ' ἂν καὶ τοῦτ' ἔχειν ἀπορίαν, εἰ μὴ ἄρα περίεργόν ἐστι, τὸ ζητεῖν κτλ., hat Th. zu ἀπορίαν antithetisch das Subst. περιεργίαν gebildet und es von ἔχειν mitabhängen lassen.", JAEGER (1932) 293.

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[1] LSJ offers the not quite parallel example of πημμάτων περιεργίαι, Luc. *Nigr.* 33 ("*curiosities* of cakes", s.v.).

[2] "car pour ce qu'il n'est pas possible d'assimiler, c'est peine perdue que de s'y acharner par tous les moyens", tr. AMIGUES.

L-M defend, against JAEGER, the manuscript tradition from a different point of view: "il n'est sans doute pas impossible de conserver le texte, surtout si l'on accepte de rattacher τοῦ ζητεῖν aussi bien à ἀπορίαν qu'à περιεργίαν (...). La construction *apo koinou* facilite en effect le zeugme sémantique résultant du fait que la question peut bien comporter une difficulté (ἀπορία τοῦ ζητεῖν), mais non proprement 'une subtilité excessive dans la recherche', puisqu'elle est elle-même l'objet de la recherche." (*ad loc.*). As has been argued above, however, both the construction and the idea of περιεργία τοῦ ζητεῖν are perfectly sound, περιεργίαν τοῦ ζητεῖν quite effectively replacing ἀπορίαν; if a zeugma is at all involved, it seems to be rather in the use of ἔχειν.

8 a 24-7 καὶ σχεδὸν ... ἐσθλά".

καί adds a second question that might be asked, closely connected with the first one: (τί δή ποτε ἡ φύσις ... ἐστίν,) καὶ (sc. τί δή ποτε) σχεδὸν ἰσομοιρεῖ κ.τ.λ. Here again, the situation to be explained (if it can be explained at all), that in the cosmos as a whole the share of the worse is equal to that of the better, is taken for granted by implication.

ἰσομοιρεῖν is yet another term with socio-political connotations that is used in metaphysical contexts to illustrate the interrelation of the constituent parts of the cosmic whole (see *ad* κοινωνία, 4 a 10; cp. also *ad* ὡς ἂν πόλις, 8 a 5). Here again,[1] **σχεδόν** qualifies the precision of a quantative statement: see *ad* 6 a 26 (p. 260 above); cp. *HP* III.5.6 σχεδὸν ἰσόπαχες, III.10.1 πάχος καὶ ὕψος ἔχον σχεδὸν ἴσον, *CP* II.9.2 σχεδὸν ἰσομήκεις; also II.13.4 σχεδὸν ὅμοιον, II.3.3 σχεδὸν ... ὁμολογουμένη.

The significance of the observation that the share of **τὸ χεῖρον** equals that of **τὸ βέλτιον**, naturally varies with the reference of these terms. More fundamentally, in view of 11 a 25-6 it may be supposed that, as far as the ingredients of the cosmos are concerned, Th. himself would not readily recognize 'good' and 'bad' parts in any absolute sense, τὰ ὄντα being 'good' *per se*—although he does subscribe to the idea of matter with form being better than matter by itself (see also Chapter VI, 8 a 14 ff.). This, in fact, may be the reason why Th. uses the comparatives[2] (contrast ἐσθλά 8 a 27, and ἀγαθά 8 b 1), because they fit in fairly well with a conception of the cosmos the parts of which are continuous and in a relation of priority/posteriority: see *ad* μὴ ἐπεισοδιῶδες 4 a 14 and τὰ μὲν πρότερα τὰ δ' ὕστερα 4 a 15.

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[1] See 6 a 26, 7 a 1, 8 b 20.

[2] Although, of course, the use of comparatives in statements of contrast does not in itself require explanation; cp. e.g. Eur. *Suppl.* 196-7 quoted p. 382 n. 3 below.

In ethical & political contexts, when predicated of subjects with contrasting social (& moral) qualities (e.g. οἱ κακοί, οἱ ἐσθλοί), 'having an equal share' implies a negative judgment, as in

Solon *ap.* Arist. *Ath. Pol.* 12.3 (...) οὐδέ μοι τυραννίδος / ἀνδάνει βίᾳ τι ῥέζειν, οὐδὲ πιείρας χθονὸς / πατρίδος κακοῖσιν ἐσθλοὺς ἰσομοιρίαν ἔχειν.[1]

If predicated, on the other hand, of free-born men in a democracy, ἰσομοιρία is a positive term, denoting as it does the situation of equality in which each man is getting what is due to him. See e.g.

Thuc. VI.39 (Athenagoras' speech) ἐγὼ δέ φημι πρῶτα μὲν δῆμον ξύμπαν ὠνομάσθαι, ὀλιγαρχίαν δὲ μέρος, ἔπειτα φύλακας μὲν ἀρίστους εἶναι χρημάτων τοὺς πλουσίους, βουλεῦσαι δ' ἂν βέλτιστα τοὺς ξυνετούς, κρῖναι δ' ἂν ἀκούσαντας ἄριστα τοὺς πολλούς, καὶ ταῦτα ὁμοίως καὶ κατὰ μέρη καὶ ξύμπαντα ἐν δημοκρατίᾳ ἰσομοιρεῖν.[2]

ἰσομοιρία may thus come to be conceived as a guarantee for the stability of a community;[3] this usage apparently lies at the root of its metaphorical use in metaphysical contexts: see

Ps.-Arist. *De Mundo* 396 b 34 – 397 a 5 (396 b 23 ff. οὕτως οὖν καὶ τὴν τῶν ὅλων σύστασιν, οὐρανοῦ λέγω καὶ γῆς τοῦ τε σύμπαντος κόσμου, διὰ τῆς τῶν ἐναντιωτάτων ἀρχῶν κράσεως μία διεκόσμησεν ἁρμονία· ...) αἰτία δὲ ταύτης [sc. τῆς τοῦ παντὸς σωτηρίας] μὲν ἡ τῶν στοιχείων ὁμολογία, τῆς δὲ ὁμολογίας ἡ ἰσομοιρία καὶ τὸ μηδὲν αὐτῶν πλέον ἕτερον ἑτέρου δύνασθαι· τὴν γὰρ ἴσην ἀντίστασιν ἔχει τὰ βαρέα πρὸς τὰ κοῦφα καὶ τὰ θερμὰ πρὸς θάτερα, τῆς φύσεως ἐπὶ τῶν μειζόνων διδασκούσης ὅτι τὸ ἴσον σωστικόν πώς ἐστιν ὁμονοίας, ἡ δὲ ὁμόνοια τοῦ πάντων γενετῆρος καὶ περικαλλεστάτου κόσμου.
(Cp. 396 b 1 ὡς κἂν εἰ πόλιν τινὲς θαυμάζοιεν, ὅπως διαμένει συνεστηκυῖα ἐκ τῶν ἐναντίων ἐθνῶν, ... λέγω... πονηρῶν χρηστῶν, p. 378 above.)

In the present context both aspects seem to be relevant. On the one hand, the fact that the focus is on the negative member of the opposition (τὸ χεῖρον) seems to lend the question a critical tenor: to ask *why it is that* the share of the worse equals that of the better reveals that this situation is considered unfair. On the other hand, the general purport of the passage that one should

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[1] "... nor <did it please my mind> that in our fatherland / Base and noble should have equal portion in her fertile soil.", tr. Rackham.

[2] "and that each and all of these classes have in a democracy equal privileges", tr. Jowett.

[3] Cp. the more demanding conception of the survival of humanity as a whole depending on the predominance of 'the good' (in the sphere of faculties and resources), as stated by Theseus in Eur. *Suppl.* 196-200 (...) ἔλεξε γάρ τις ὡς τὰ χείρονα / πλείω βροτοῖσίν ἐστι τῶν ἀμεινόνων· / ἐγὼ δὲ τούτοις ἀντίαν γνώμην ἔχω, / πλείω τὰ χρηστὰ τῶν κακῶν εἶναι βροτοῖς· / εἰ μὴ γὰρ ἦν τόδ' οὐκ ἂν ἦμεν ἐν φάει.

refrain from asking for an explanation, seems to imply that the role of contraries (with by implication the 'worse' serving to balance the 'better') is accepted as a principle.

Seen in this perspective, the parenthesis in which Th. corrects this analysis (**μᾶλλον δέ**) in the sense that the worse even exceeds <the better> by far (**καὶ πολλῷ πλέον ἐστίν**), clearly suggests that the worse transgresses the limits set to it in a balanced whole. (The parenthetical nature of this correction appears also from its being ignored by the inference introduced by ὥστε in 8 a 25 ff., which is based rather on the *ἰσομοιρία* of better and worse.)

But here again, of course, the significance of the judgment depends on what is meant by 'the worse'.[1] With the present designation Th. seems in fact to conform to a scale of valuation which starts from a teleological[2] point of view: what is meant by 'the worse' here is apparently either (i) 'the inanimate' (cp. 11 a 13 ff.: εἰ γὰρ καὶ ἡ ὄρεξις οὕτως, ἀλλ' ἐκεῖνό γ' ἐμφαίνει διότι *πολὺ τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον τὸ εὖ (μᾶλλον δὲ πολλῷ πλεῖον)*· ὀλίγον γάρ τι τὸ ἔμψυχον, *ἄπειρον δὲ τὸ ἄψυχον*), or (ii) 'the disorderly', 'the indeterminate' (cp. 11 a 18 ff.: τὸ δ' ὅλον "σπάνιόν τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν, *πολὺ δὲ πλῆθος εἶναι τὸ κακόν*" (οὐκ *ἐν ἀοριστίᾳ δὲ μόνον καὶ οἷον ὕλης εἴδει*, καθάπερ τὰ τῆς φύσεως) ἀμαθεστάτου.) or even (iii) 'absence of circular movement' (5 b 21-2 νῦν γὰρ οἷον ἀπεωσμένα τῶν ἐντιμοτάτων ... κατὰ τὴν ἐνέργειαν, εἴπερ ἡ κυκλικὴ τοιαύτη, said of τὰ περὶ τὸ μέσον; see also 6 a 3-5: ἀξιοῖ ... ὁ τοῦτο λέγων ἅπανθ' ὅμοια καὶ ἐν τοῖς ἀρίστοις εἶναι, μικράν τιν' ἢ μηδεμίαν ἔχοντα διαφοράν).

Compare, for the second possibility especially,

> Arist. *Met.* 984 b 32 – 985 a 3 ἐπεὶ δὲ καὶ τἀναντία τοῖς ἀγαθοῖς ἐνόντα ἐφαίνετο ἐν τῇ φύσει, *καὶ οὐ μόνον τάξις καὶ τὸ καλὸν ἀλλὰ καὶ ἀταξία καὶ τὸ αἰσχρόν*, καὶ πλείω τὰ κακὰ τῶν ἀγαθῶν καὶ τὰ φαῦλα τῶν καλῶν, οὕτως ἄλλος τις φιλίαν εἰσήνεγκε καὶ νεῖκος, ἑκάτερον ἑκατέρων αἴτιον τούτων.

Noticeably, with all of these interpretations the assertion that the worse in fact exceeds the better may be consistent with the judgment that the cosmos is a coherent diversified whole, and as such good the way it is.

As a consequence of the observation that "the worse has a share practically equal to the better" Euripides seems to be making a universal statement

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[1] One may compare, in a very different context, the observation that there are more situations in which plants are injured by each other than in which they are beneficial to each other: *CP* II.18.4 οὐ χαλεπὸν δ' ἴσως οὐδὲ ἐν ἄλλοις γε πλείοσι λαβεῖν τὰς βλάβας (*πολλῷ γὰρ πλείους εἰσὶ τῶν ὠφελίμων*, ὥσπερ καὶ τοῖς ζῴοις)· ...

[2] That is to say, in so far as teleology amounts to the belief that in nature there is a tendency to form, order, and eternity: see Ch. IX, esp. 11 a 1-18.

(**ὥστε δοκεῖν ... Εὐριπίδην καθόλου λέγειν**; for ὥστε, see above) when he says —in a socio-political context—that "good things cannot come apart". The quotation "**οὐκ ἂν γένοιτο χωρὶς ἐσθλά**" is taken from Euripides' *Aeolus*, its context being known to us from the seven iambic trimeters quoted by Stobaeus: (Eur. Fr. 21 Nauck)

δοκεῖτ' ἂν οἰκεῖν γαῖαν, εἰ πένης ἅπας
λαὸς πολιτεύοιτο πλουσίων ἄτερ;
οὐκ ἂν γένοιτο χωρὶς ἐσθλὰ καὶ κακά,
ἀλλ' ἔστι τις σύγκρασις, ὥστ' ἔχειν καλῶς.
ἃ μὴ γὰρ ἔστι τῷ πένητι πλούσιος
δίδωσ'· ἃ δ' οἱ πλουτοῦντες οὐ κεκτήμεθα,
τοῖσιν πένησι χρώμενοι θηρώμεθα.[1]

The idea of **καθόλου λέγειν** apparently is that, in spite of the specific (socio-political) context in which they are uttered, these words also apply to the cosmos as a whole (cp. ἡ ὅλη ... οὐσία τοῦ παντός, 8 a 23), in accordance one might add with Aristotle's observation that poetry, as compared to historiography, is "more philosophical" by virtue of its greater concern with τὰ καθόλου (Arist. *Poet.* 1451 b 5 ff.). The addition of **καὶ** (Εὐριπίδην) seems to imply that this poet too seems to be speaking with universal implications—as a philosopher might have done.

Even to those not familiar with Euripides' play (or, with this particular quotation), the absence of καὶ κακά can hardly be a problem (or, worse, give rise to misunderstanding): the fact that Th. leaves out these words actually brings out the aspect of injustice which is one of the possible reactions to the observation that τὸ χεῖρον has a share of the whole practically equal to that of τὸ βέλτιον (see above); this aspect will be prominent in what follows too (see οὐ πάντ' ἀγαθὰ οὐδὲ πάντα ὅμοια, 8 b 1).

On the other hand, both the modality of οὐκ ἂν γένοιτο and the context of the quotation (both the rhetorical question in vv. 1-2 and the next line ἀλλ' ἔστι τις σύγκρασις, ὥστ' ἔχειν καλῶς) are in accordance with the general drift of this paragraph, that a coexistence of opposites is both natural and 'good'.

The same quotation is used in various contexts by Plutarch; in *Is. et Os.* it occurs in cosmological/theological context:

Plut. *Mor.* 369 A-D ἀδύνατον γὰρ ἢ φλαῦρον ὁτιοῦν, ὅπου πάντων, ἢ χρηστόν, ὅπου μηδενὸς ὁ θεὸς αἴτιος, ἐγγενέσθαι.[2] "παλίντονος" γὰρ "ἁρμονίη κόσ-

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[1] θηρώμεθα Berger; τιμώμεθα MSS.

[2] "The fact is that it is impossible for anything bad whatsoever to be engendered where God is the Author of all, or anything good where God is the Author of nothing", tr. Babbit.

μου, ὅκωσπερ λύρης καὶ τόξου" καθ' Ἡράκλειτον· καὶ κατ' Εὐριπίδην "οὐκ ἂν γένοιτο χωρὶς ἐσθλὰ καὶ κακά, ἀλλ' ἔστι τις σύγκρασις, ὥστ' ἔχειν καλῶς". διὸ καὶ παμπάλαιος αὕτη κάτεισιν ἐκ θεολόγων καὶ νομοθετῶν εἴς τε ποιητὰς καὶ φιλοσόφους δόξα, τὴν ἀρχὴν ἀδέσποτον ἔχουσα ... ὡς οὔτ' ἄνουν καὶ ἄλογον καὶ ἀκυβέρνητον αἰωρεῖται τῷ αὐτομάτῳ τὸ πᾶν ..., *ἀλλὰ πόλλα καὶ μεμιγμένα κακοῖς καὶ ἀγαθοῖς, μᾶλλον δὲ μηδέν, ὡς ἁπλῶς εἰπεῖν, ἄκρατον ἐνταῦθα τῆς φύσεως φερούσης* ...

εἰ γὰρ οὐδὲν ἀναιτίως πέφυκε γίνεσθαι, αἰτίαν δὲ κακοῦ τἀγαθὸν οὐκ ἂν παράσχοι, δεῖ γένεσιν ἰδίαν καὶ ἀρχὴν ὥσπερ ἀγαθοῦ καὶ κακοῦ τὴν φύσιν ἔχειν.

In *Tranq. an.* the quotation likewise appears in the company of Heraclitus' παλίντονος ἁρμονίη, this time to illustrate that in human affairs (τὰ ἀνθρώπινα) nothing is καθαρόν or ἀμιγές, so that people should ὥσπερ ἁρμονικοὺς ἀμβλύνοντας ἀεὶ τοῖς κρείττοσι τὰ χείρονα καὶ τὰ φαῦλα τοῖς χρηστοῖς ἐμπεριλαμβάνοντας, ἐμμελὲς τὸ τοῦ βίου μῖγμα ποιεῖν καὶ οἰκεῖον αὐτοῖς. (Plut. *Mor.* 474 B).

In *Aud. poet.* (*Mor.* 474 A) Plutarch quotes these particular verses from Euripides' play in the context of the argument that poetry, conceived as a μίμησις of reality, should show σημεῖα of both virtue and vice.

8 a 27 – b 4 ὁ δὲ τοιοῦτος λόγος ... ἐν αὐτοῖς.

ὁ τοιοῦτος λόγος refers to the question involving an ἀπορία formulated in 8 a 22-7 (τί δή ποτε ... ἐσθλά—excluding the parenthesis μᾶλλον δὲ καὶ πολλῷ πλέον ἐστίν); compare

CP I.16.8 ἀλλ' ὑπὲρ μὲν τούτων τάχ' ἂν ὕστερον εἴη λεκτέον· πλείων γὰρ ὁ λόγος καὶ ἔχων τινὰ ἀπορίαν,[1] ποῖα θερμὰ καὶ ψυχρὰ καὶ ποίοις διοριστέον, ...

To ask *why it is that* the share in the cosmos of the worse practically equals that of the better, 'comes near to' asking (**ἐγγὺς τοῦ ζητεῖν**)—i.e., lays bare the less neutral question[2]—why not all things are good, and not all things alike. For (ζητεῖν) **ὅτι**, see K-G II.1.310-1, who relate this use to the attributive use of the accusative, like τοῦτο χαίρω as an alternative for ταύτην τὴν χαρὰν χαίρω.[3] Cp. Thuc. I.90 ὁπότε τις αὐτὸν ἔροιτο τῶν ἐν τέλει ὄντων ὅτι οὐκ ἐπέρχεται ἐπὶ τὸ κοινόν, ἔφη τοὺς ξυμπρέσβεις ἀναμένειν κ.τ.λ.

The use of the positive in **οὐ πάντ' ἀγαθά**, instead of the comparative, serves to bring out the high expectations which may be suspected to lie at the

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[1] "since we have here a question of some length and involving a certain difficulty", tr. EINARSON/LINK.

[2] Cp. 6 a 3 *ἀξιοῖ* ... ὁ τοῦτο λέγων.

[3] "in dem Demonstrative ... [liegt] zugleich der Grund der Freude", K-G II.1.310.

root of the question (τί δή ποτε) σχεδὸν ἰσομοιρεῖ τὸ χεῖρον τῷ βελτίονι, 8 a 24. **οὐδὲ πάντα ὅμοια** presumably involves a climax because the implication of expecting that *all things* are *good*, i.e. that all things (πάντα being repeated for emphasis' sake) are *alike*, may be considered to be even more evidently absurd. Cp. 6 a 3-5 (ἀξίοι ... ὁ τοῦτο λέγων) ἅπανθ' ὅμοια καὶ ἐν τοῖς ἀρίστοις εἶναι, *μικράν τιν' ἢ μηδεμίαν ἔχοντα διαφοράν*.

The question καὶ (sc. τοῦ ζητεῖν) ὅτι κ.τ.λ. seems to introduce a rephrasing (presumably in Th.' own terms) of the preceding (possible) question rather than a new one. The difficulty for people here lies in the fact that on the one hand (**μέν**) they recognize that 'being' is predicated of all things (ἀγαθά and κακά)—cp. Arist. *Top.* 121 a 17-8 κατὰ πάντων γὰρ τῶν ὄντων τὸ ὂν καὶ τὸ ἓν κατηγορεῖται—, whereas on the other (**δέ**) they find in them (**ἐν αὐτοῖς**; i.e. in all things, in τὰ ὄντα) nothing in which they are alike to each other (**οὐθὲν ... ὅμοιον ἀλλήλοις**), presumably because they do not share a common genus. For the genus of contraries expressed as ὅμοιόν τι, compare

> Arist. *GC* 323 b 29 – 324 a 5 ἀλλ' ἐπεὶ οὐ τὸ τυχὸν πέφυκε πάσχειν καὶ ποιεῖν, ἀλλ' ὅσα ἢ ἐναντία ἐστὶν ἢ ἐναντίωσιν ἔχει, ἀνάγκη καὶ τὸ ποιοῦν καὶ τὸ πάσχον τῷ γένει μὲν ὅμοιον εἶναι καὶ ταὐτό, τῷ δ' εἴδει ἀνόμοιον καὶ ἐναντίον (πέφυκε γὰρ σῶμα μὲν ὑπὸ σώματος, χυμὸς δ' ὑπὸ χυμοῦ, χρῶμα δ' ὑπὸ χρώματος πάσχειν, ὅλως δὲ τὸ ὁμογενὲς ὑπὸ τοῦ ὁμογενοῦς. τούτου δ' αἴτιον ὅτι τἀναντία ἐν ταὐτῷ γένει πάντα, ποιεῖ δὲ καὶ πάσχει τἀναντία ὑπ' ἀλλήλων), ὥστ' ἀνάγκη πῶς μὲν εἶναι ταὐτὰ τό τε ποιοῦν καὶ τὸ πάσχον, πῶς δ' ἕτερα καὶ ἀνόμοια ἀλλήλοις.

If all entities constituting the cosmic whole would be conceived in terms of 'good' and 'evil'—as those who expect things to be invariably good seem to do—, nothing common could be recognized in them (ἐν αὐτοῖς, in emphatic position, stresses the comprehensiveness implied by κατὰ πάντων, 8 b 2),[1] apparently because ἀγαθόν and κακόν belong to the special type of contraries which do not share a common genus: see

> 127A FHS&G (= Simpl. *In Cat.* 14 a 19) Θεόφραστος δὲ ἐν τοῖς ἑαυτοῦ Τοπικοῖς τάδε γέγραφεν ἀπορώτερον ἔτι ποιοῦντα τὸν λόγον· "ἐπεὶ δὲ ἐναντίαι τῶν ἐναντίων αἱ ἀρχαί, δῆλον ὅτι οὐδὲ ἐν ἑνὶ γένει ταῦτα, καθάπερ οὐδὲ τὸ ἀγαθὸν καὶ τὸ κακὸν καὶ κίνησις καὶ στάσις. εἴη δ' ἂν καὶ ὑπεροχὴ καὶ ἔλλειψις ἐναντία γε καὶ ἀρχαί, καὶ εἶδος καὶ στέρησις."
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> 127B FHS&G (= Alex. Aphr. *In Met.* 1018 a 25) ἐναντία γὰρ γένη τὸ ἀγαθὸν καὶ τὸ κακόν, ὡς αὐτὸς ἐν ταῖς Κατηγορίαις εἴρηκε καὶ ἐν τῷ τετάρτῳ τῶν

[1] So that there appears to be no reason to speak of a "découpage artificiel", L-M *ad loc.*, who connect ἐν αὐτοῖς with τὰ λευκὰ καὶ μέλανα: "ce qui est blanc et noir parmi elles" (tr.).

Τοπικῶν καὶ Θεόφραστος ἐν τῷ πρώτῳ τῶν Τοπικῶν, ἃ οὐχ οἷά τε τῶν ὑπ' αὐτὰ ἅμα τινὶ ὑπάρξαι. τοιαῦτα καὶ τὰ ὑπὸ τὴν κίνησιν καὶ στάσιν.

By Aristotle at any rate 'being' itself is not conceived as a genus (τὸ δ' εἶναι οὐκ οὐσία οὐδενί· οὐ γὰρ γένος τὸ ὄν, Arist. *An. Post.* 92 b 14), with the result that from his point of view the good and the evil things indeed cannot be said to share being as something common to them, generic ὁμοιότης or ταὐτότης being the ultimate type of similarity (sameness, unity) where all others do not apply, with the exception of analogical similarity (sameness, unity);[1] see 9 a 4-6, and note *ad loc.*

The paradoxical situation, which is not recognized as such by these people, thus seems to be that, while the totality of being may consist of 'good' (c.q. better) and 'bad' (c.q. worse) things—the latter to be conceived in terms of matter/disorder(ly movement)—, at the same time reality, and thus its constituent parts, may in themselves be regarded as good: see τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν ὄντα, 11 a 25-6. Accordingly it is unnecessary, the idea seems to be, to expect all things to be good in the sense of having form/being orderly.

καθάπερ τὰ λευκὰ καὶ μέλανα (sc. ὅμοιόν τι ἔχουσι),[2] then, involves a comparison by contrast: whereas entities conceived as either 'good' or 'bad', are contrary to one another without at the same time sharing a common genus, entities characterized by an opposition of the type white vs. black, *are* similar to one another in the sense that they share the genus of χρῶμα:

Arist. *Cat.* 14 a 20-2 λευκὸν μὲν γὰρ καὶ μέλαν ἐν τῷ αὐτῷ γένει (χρῶμα γὰρ αὐτῶν τὸ γένος), ...

Met. 1057 b 4-15 καὶ εἰ μὲν γένος ἔσται οὕτως ὥστ' εἶναι πρότερόν τι τῶν ἐναντίων, αἱ διαφοραὶ πρότεραι ἐναντίαι ἔσονται αἱ ποιήσασαι τὰ ἐναντία εἴδη ὡς γένους· ἐκ γὰρ τοῦ γένους καὶ τῶν διαφορῶν τὰ εἴδη. *οἷον εἰ τὸ λευκὸν καὶ μέλαν ἐναντία, ἔστι δὲ τὸ μὲν διακριτικὸν χρῶμα τὸ δὲ συγκριτικὸν χρῶμα,* αὗται αἱ διαφοραὶ τὸ διακριτικὸν καὶ συγκριτικὸν πρότεραι· ὥστε ταῦτα ἐναντία ἀλλήλοις πρότερα. ἀλλὰ μὴν τά γε ἐναντίως διαφέροντα μᾶλλον ἐναντία, καὶ τὰ λοιπὰ καὶ τὰ μεταξὺ ἐκ τοῦ γένους ἔσται καὶ τῶν διαφορῶν· οἷον ὅσα χρώματα τοῦ λευκοῦ καὶ μέλανός ἐστι μεταξύ,

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[1] Analogical similarity, which involves a comparability in function between entities belonging to different genera, may in fact be relevant here, in so far as what all entities, including those relating in the manner of opposites, share might seem to consist in their contributing to the cosmic whole.

[2] Somewhat comparable instances of brachylogy in the botanical treatises have been listed by HINDENLANG (1910) 91 ff.; e.g. *CP* V.15.5 καὶ γὰρ ἡ ὀροβάγχη καλουμένη φθείρει τὸν ὄροβον τῷ περιπλέκεσθαι καὶ καταλαμβάνειν, καὶ τὸ αἱμόδωρον τὸ βουκέρας, εὐθὺς τῇ ῥίζῃ παραφυόμενον, καὶ ἄλλαι δ' ἄλλων (sc. φθοραί?). "There are also cases where a special victim is singled out, as among the smaller plants: so the so-called 'vetch-choker' kills vetch by entwining round it and holding it fast, ..., and there are other killers that have other special victims", tr. EINARSON/LINK; "andere Pflanzen sind das Verderben anderer", HINDENLANG 93.

ταῦτα δεῖ ἔκ τε τοῦ γένους λέγεσθαι (*ἔστι δὲ γένος τὸ χρῶμα*) καὶ ἐκ διαφορῶν τινῶν· ...

For the comparison by contrast with a negative *explanandum* and a positive example, compare

CP 1.12.4 ἁπλῶς γὰρ ὡς εἰπεῖν ἡ φύσις οὐθὲν καθάπερ ἡ τέχνη ποιεῖ κατὰ μέρος, ...

Contrast the following passage, in which both *explanandum* and example are in the negative:

Arist. *Met.* 1058 b 29 – 1059 a 1 νῦν μὲν οὖν ἐπ' αὐτῶν εἰρήκαμεν τῶν καθόλου ὀνομάτων, ἴσως δὲ δόξειεν ἂν οὐκ ἀναγκαῖον εἶναι ὁτιοῦν ἄφθαρτον καὶ φθαρτὸν ἕτερα εἶναι τῷ εἴδει, ὥσπερ οὐδὲ λευκὸν καὶ μέλαν.[1] τὸ γὰρ αὐτὸ ἐνδέχεται εἶναι καὶ ἅμα, ἐὰν ᾖ τῶν καθόλου, ὥσπερ ὁ ἄνθρωπος εἴη ἂν καὶ λευκὸς καὶ μέλας, καὶ τῶν καθ' ἕκαστον· εἴη γὰρ ἂν μὴ ἅμα ὁ αὐτὸς λευκὸς καὶ μέλας· καίτοι ἐναντίον τὸ λευκὸν τῷ μέλανι.

ἀλλὰ τῶν ἐναντίων τὰ μὲν κατὰ συμβεβηκὸς ὑπάρχει ἐνίοις, οἷον καὶ τὰ νῦν εἰρημένα καὶ ἄλλα πολλά, τὰ δὲ ἀδύνατον, ὧν ἐστὶ καὶ τὸ φθαρτὸν καὶ τὸ ἄφθαρτον· ...

The upshot of this paragraph thus seems to be that the question *why* the nature of the whole consists in contraries (a) amounts to asking a question which cannot be answered, and (b) fails to recognize the paradox that the entities which are designated as 'bad' or 'evil', still, in the sense that they are parts of the whole, are 'good'.

VII.2 (8 b 4-9): *That the contraries are essential to being, so that being, which is good, depends for its existence on evil, is even more paradoxical. To apply contrariety to being itself is pushing the paradox too far.*

8 b 4-5 ἔτι δὲ ... τῶν ἐναντίων.

The syntactical structure of this sentence, again, is not unambiguous. The combination **ἔτι δέ** very often introduces a next point (cp. 5 a 8, 7 a 4, 7 b 22, 9 b 25, 10 b 7, 11, 21).[2] On the other hand, it seems quite natural to connect

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[1] "so that it might be thought not to be necessary that every imperishable thing should be different from every perishable thing in form, just as not every white thing is different in form from every black thing." *RevOT.*

[2] See *ad* 10 b 7, pp. 498 f. below; cp. L-M: "[Il y a] en outre ce qui peut sembler plus paradoxal". Cp. also the reading of A: ἔτι δὲ καί (L-M, *app. crit.*).

ἔτι with παραδοξότερον (cp. ἔτι πλέονι τῷ παραδόξῳ χρώμενοι, 8 b 6); in that case παραδοξότερον is likely to be used predicatively:[1] cp. *CP* II.17.4 ἔτι γὰρ τοῦτο παραδοξότερον, ὅτι ... (see also below); Ps.-Arist. *Spir.* 481 b 25 μεῖζον δ' οὕτως ἔτι καὶ παραδοξότερον τὸ συμβαῖνον.
Since ὡς (rather than ὅτι) makes it likely that one should read τὸ δοκοῦν rather than τὸ (δοκοῦν) παραδοξότερον, the latter interpretation of ἔτι seems to be preferable.

ἔτι ... παραδοξότερον, then, seems to be said by way of comparison to the preceding paradox that the entities which are designated as 'bad' or 'evil' still are 'good' insofar as they are parts of the whole (see preceding note). Even *more* paradoxical is the view (**τὸ δοκοῦν**: see below) that **τὸ ὄν**, in the sense of the totality of being,[2] cannot exist without the contraries (**οὐχ οἷόν τε ... ἄνευ τῶν ἐναντίων**), including (as indicated by the article) those of good and evil—if one considers that the totality of being is 'good' in itself: see preceding note. Being, which is good, depends for its existence also on evil.

The fact that the paradox rests on the view (implied by what has gone before) that being as a whole is good *per se*, suggests that we should understand τὸ δοκοῦν (sc. ἡμῖν):[3] that this opinion can be ascribed to Th. is suggested by 11 b 11-2 τὴν ὅλην οὐσίαν ἐξ ἐναντίων γε καὶ ⟨ἐν⟩ ἐναντίοις οὖσαν.

And yet, the idea itself might have been called a 'received opinion' (this would be relevant especially in the case of an attributive interpretation of δοκοῦν: see above): see

Arist. *Met.* 1004 b 29-31 τὰ δ' ὄντα καὶ τὴν οὐσίαν ὁμολογοῦσιν ἐξ ἐναντίων σχεδὸν ἅπαντες συγκεῖσθαι· πάντες γοῦν τὰς ἀρχὰς ἐναντίας λέγουσιν· ...
Sens. 82 εἰ δὲ μὴ ἐναντίον (sc. τὸ χλωρὸν τῷ ἐρυθρῷ), αὐτὸ τοῦτ' ἄν τις θαυμάσειεν, ὅτι τὰς ἀρχὰς οὐκ ἐναντίας ποιεῖ (sc. Democritus)· δοκεῖ γὰρ ἅπασιν οὕτως.

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[1] As a matter of fact, a predicative interpretation of παραδοξότερον seems to be more likely anyway, since the attributive use of δοκοῦν would appear to yield the interpretation 'the commonly accepted more paradoxical situation' (see e.g. Arist. *Top.* 105 b 11 ἀρχὴν καὶ δοκοῦσαν θέσιν "a principle or accepted thesis", *RevOT*; cp. also τὸ μέγιστον δὴ καὶ μάλιστα δοκοῦν "the main, and most generally accepted example" 10 b 16), and this by itself would seem to involve some sort of oxymoron: see Arist. *Top.* 104 a 8-10 ἔστι δὲ πρότασις διαλεκτικὴ ἐρώτησις ἔνδοξος ἢ πᾶσιν ἢ τοῖς σοφοῖς, καὶ τούτοις ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς μάλιστα γνωρίμοις, *μὴ παράδοξος*· θείη γὰρ ἄν τις τὸ δοκοῦν τοῖς σοφοῖς, *ἐὰν μὴ ἐναντίον ταῖς τῶν πολλῶν δόξαις ᾖ*.

[2] In view of the preceding this is the obvious sense here; cp. τὸ ὄν καὶ πᾶν, 224.6 FHS&G.

[3] For the phrase cp. παρὰ τὸ δοκοῦν ἡμῖν, Thuc. I.84 (the plural having a 'real' reference here); τὸ δοκοῦν ἑκάστῳ Arist. *Met.* 1062 b 14; τὸ δοκοῦν τοῖς σοφοῖς, Arist. *Top.* 104 a 9, note 1 above.

For παράδοξος by itself not implying that the alleged situation does not obtain, see e.g.

> *CP* II.17.4 ἐπεὶ τό γε ἐμφύεσθαι καὶ ἐν δένδροις καὶ ἐν φυτοῖς ἑτέροις τὸ καὶ ἐν τῇ γῇ φυόμενον οὐκ ἄτοπον, ἀλλὰ καὶ γινόμενον, ὥσπερ ὁ κιττὸς ἐν πολλοῖς. (ἔτι γὰρ τοῦτο *παραδοξότερον* ("is of a more unexpected sort", tr. EINARSON/LINK), ὅτι καὶ ἐν ἐλάφου κέρασιν ὤπται· καὶ ἡ τέρμινθος δὲ ἐν ἐλαίᾳ, ... καὶ *ὅσα δὴ σπανιώτερα καὶ τερατωδέστερα φαίνεται*, ... ὅταν γὰρ εἰς γεῶδες γεγενημένον διὰ σῆψιν ἐμπέσῃ τὸ σπέρμα, διεβλάστησεν, εἶτα ζῇ τὴν τροφὴν τὴν ἐκ τοῦ δένδρου λαμβάνον, ὃ καὶ ἐπὶ τοῦ κιττοῦ τοῦ περὶ τὰ κέρατα βλαστοῦντος—*εἴπερ ἦν—οὐκ ἄλογον*.).

8 b 6-9 οἱ δ' ... ὑπερβατός τις σοφία.

The preceding paradoxes are yet surpassed by the opinion (this time explicitly ascribed to others: **οἱ δὲ ... χρώμενοι**) which includes in the nature of the whole even what is not, has not been and will not be. **τῷ παραδόξῳ** may be interpreted as "the paradox mentioned earlier"; the opinion that being, which is good in itself, depends for its existence both on good and on evil, is surpassed by the opinion of those who extend the paradox even further (**ἔτι πλέονι**)[1] and do not even recognize 'being' as the only predicate shared by all constituents of the cosmos (see κατὰ πάντων ... τὸ εἶναι λέγομεν 8 b 2): they 'count in' in the nature of the whole (**εἰς τὴν τοῦ παντὸς φύσιν**)[2] even not-being in the sense of what being does not apply to at any time in the present, past, or future (**τὸ μὴ ὂν μηδὲ γεγονὸς μηδὲ μέλλον**). For the compound **προσκαταριθμέω**, which this is the earliest attestation of, see *ad* ἀντιμεταλλακτέον, 7 b 13-4; προσ- seems to reinforce the purport of **καί** (8 b 6). μηδὲ γεγονὸς μηδὲ μέλλον[3] apparently is added in order to distinguish this concept of not-being from not-being in the sense of matter (8 a 10), which at some time in the future may at least acquire being by being shaped.

This paradox amounts to pushing the role of opposites to the admittedly brain-straining extremity of assuming that the universe (τὸ ὄν, τὸ πᾶν), which is to be defined as the sum-total of ὄντα (that is, πάντα), also includes, all-comprehensive as it is, the contrary of its own characteristic, i.e. non-being.

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[1] For the predicative use of πολύς see K-G II.1.637.

[2] Cp. τὴν τοῦ ὅλου φύσιν, 11 b 5-6.

[3] The order reveals the aim of comprehensiveness; cp. Plato *Leg.* 896 A 5 – B 1 εἰ δ' ἔστι τοῦτο οὕτως ἔχον, ἆρα ἔτι ποθοῦμεν μὴ ἱκανῶς δεδεῖχθαι ψυχὴν ταὐτὸν ὂν καὶ τὴν πρώτην γένεσιν καὶ κίνησιν *τῶν τε ὄντων καὶ γεγονότων καὶ ἐσομένων* καὶ πάντων αὖ τῶν ἐναντίων τούτοις, ἐπειδή γε ἀνεφάνη μεταβολῆς τε καὶ κινήσεως ἁπάσης αἰτία ἅπασιν; Contrast the *temporal* sequence διήγησις ... ἢ γεγονότων ἢ ὄντων ἢ μελλόντων, Plato *Resp.* 392 D 3.

As the argument starts from the predominant role of contraries, it is just possible that an entirely theoretical and (as it were) 'abstract' way of reasoning is meant, all further identification of the not-being involved thus being made impossible. In that case οἱ ... χρώμενοι would be adequately explained as 'those who proceed even further along this line of thought' (cp. ὑπερβατός τις σοφία, below). One might compare the addition of τῶν τε ὄντων καὶ γεγονότων καὶ ἐσομένων καὶ *πάντων αὖ τῶν ἐναντίων τούτοις* by the Athenian in Plato *Leg.* 896 A 7 (p. 390 n. 3), where likewise the emphasis is on comprehensiveness (μεταβολῆς τε καὶ κινήσεως *ἁπάσης* αἰτία *ἅπασιν*), although there it may have a mechanical or 'formulaic' aspect which obviously is absent here; but also

> Arist. *GC* 335 a 33 – b 2 τὰ μὲν γὰρ ἐξ ἀνάγκης ἐστίν, οἷον τὰ ἀίδια, τὰ δ' ἐξ ἀνάγκης οὐκ ἔστιν. τούτων δὲ τὰ μὲν ἀδύνατον μὴ εἶναι, τὰ δὲ ἀδύνατον εἶναι διὰ τὸ μὴ ἐνδέχεσθαι παρὰ τὸ ἀναγκαῖον ἄλλως ἔχειν.

Still, the Stoics in particular might be meant;[1] in that case τὸ μὴ ὂν μηδὲ γεγονὸς μηδὲ μέλλον would refer to imaginary creatures like centaurs:[2] see

> *SVF* II.332 (= Sen. *Ep.* 58.15): primum genus Stoicis quibusdam videtur "quid": quare videatur subiiciam. in rerum, inquiunt, natura quaedam sunt, quaedam non sunt. *et haec autem, quae non sunt, rerum natura complectitur,* quae animo succurrunt, tamquam Centauri, Gigantes et quicquid aliud falso cogitatione formatum habere aliquam imaginem coepit, quamvis non habeat substantiam.

Since USENER (1861) 260, οἱ ... χρώμενοι have usually been identified as the Atomists; in that case 'non-being' would refer to the void; see

> 229.9-14 FHS&G (= Simpl. *In Phys.* 184 b 15) ἔτι δὲ (sc. Leucippus supposed) οὐδὲν μᾶλλον τὸ ὂν ἢ τὸ μὴ ὂν ὑπάρχειν, καὶ αἴτια ὁμοίως εἶναι τοῖς γινομένοις ἄμφω. τὴν γὰρ τῶν ἀτόμων οὐσίαν ναστὴν καὶ πλήρη ὑποτιθέμενος ὂν ἔλεγεν εἶναι καὶ ἐν τῷ κενῷ φέρεσθαι, ὅπερ μὴ ὂν ἐκάλει καὶ οὐκ ἔλαττον τοῦ ὄντος εἶναί φησι.
>
> παραπλησίως δὲ καὶ ὁ ἑταῖρος αὐτοῦ Δημόκριτος ὁ Ἀβδηρίτης ἀρχὰς ἔθετο τὸ πλῆρες καὶ τὸ κενόν, ὧν τὸ μὲν ὄν, τὸ δὲ μὴ ὂν ἐκάλει· ...

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[1] I owe this suggestion and the following reference to Professor J.C.M. van Winden.

[2] Cp. L-M *ad loc.* "il n'est pas impossible que Théophraste inclue dans la formule 'ce qui n'est pas ni n'a été ni ne sera' l'ensemble des produits de l'imagination (telle la Chimère), qui d'une certaine manière font aussi partie de notre monde", referring to Gorgias B 3 ("περὶ τοῦ μὴ ὄντος ἢ περὶ φύσεως"), II.282.1-6 DK: πρὸς τούτοις εἰ τὰ φρονούμενά ἐστιν ὄντα, τὰ μὴ ὄντα οὐ φρονηθήσεται. τοῖς γὰρ ἐναντίοις τὰ ἐναντία συμβέβηκεν, ἐναντίον δέ ἐστι τῷ ὄντι τὸ μὴ ὄν. καὶ διὰ τοῦτο πάντως, εἰ τῷ ὄντι συμβέβηκε τὸ φρονεῖσθαι, τῷ μὴ ὄντι συμβήσεται τὸ μὴ φρονεῖσθαι. ἄτοπον δ' ἔστι τοῦτο· καὶ γὰρ Σκύλλα καὶ Χίμαιρα καὶ πολλὰ τῶν μὴ ὄντων φρονεῖται. οὐκ ἄρα τὸ ὂν φρονεῖται.

ibid. 26-8 καὶ Μητρόδωρος δὲ ὁ Χῖος ἀρχὰς σχεδόν τι τὰς αὐτὰς τοῖς περὶ Δημόκριτον ποιεῖ, τὸ πλῆρες καὶ τὸ κενὸν τὰς πρώτας αἰτίας ὑποθέμενος, ὧν τὸ μὲν ὄν, τὸ δὲ μὴ ὂν εἶναι· ...

Cp. also Arist. *Met.* 985 b 5 ff.: see *Doxogr. Gr.* 483; TRICOT, REALE *ad loc.* Also

Democr. A 49, II.97.15-9 DK (= Galenus *De elem.* I.2) νομίζεται μέν τι παρὰ τοῖς ἀνθρώποις λευκόν τε εἶναι καὶ μέλαν καὶ γλυκὺ καὶ πικρὸν καὶ τἄλλα πάντα τοιαῦτα, κατὰ δὲ τὴν ἀλήθειαν δὲν καὶ μηδέν ἐστι τὰ πάντα· καὶ γὰρ αὖ καὶ τοῦτ' εἴρηκεν αὐτός, 'δέν' μὲν τὰς ἀτόμους ὀνομάζων, 'μηδὲν' δὲ τὸ κενόν. Cp. B 156, II.174.18 – 175.1.

L-M add as a candidate the numbers of Speusippus, "puisque Théophraste tend à accorder aux objets mathématiques le statut de simples constructions artificielles (cf. 4a21-2; προσκαταριθμοῦσιν prendrait alors une valeur ironique), et même à l'Un, si Speusippe l'a vraiment privé d'être"[1] (*ad loc.*), referring to Arist. *Met.* 1092 a 11-5 οὐκ ὄρθως δ' ὑπολαμβάνει οὐδ' εἴ τις παρεικάζει τὰς τοῦ ὅλου ἀρχὰς τῇ τῶν ζῴων καὶ φυτῶν, ὅτι ἐξ ἀορίστων ἀτελῶν τε ἀεὶ τὰ τελειότερα, διὸ καὶ ἐπὶ τῶν πρώτων οὕτως ἔχειν φησίν, ὥστε μηδὲ ὄν τι εἶναι τὸ ἓν αὐτό.

ἀλλ(ά) breaks off the argument, or this last insight at any rate, **ἥδε *μέν*** presumably implying a contrast to the diversity of things that *are* comprised by 'being'. As in case of the frequent use of μὲν οὖν to express that no more will be said on a particular subject, one need not attach too much weight to the contrast (supposedly expressed by μέν) between the assertion made in this sentence and that (δέ) in the next one; see *ad* δέ, 8 b 10. For **οἷον ὑπερβατός**, see *ad* 6 a 2-3.[2] The use of ὑπερβατός here seems to imply a parallelism between investigation and knowledge; 'going too far', or being excessive in the former (cp. περιεργίαν τοῦ ζητεῖν, 8 a 22) determines the nature of the product, 'wisdom' itself. (For **σοφία** as περί τινας ἀρχὰς καὶ αἰτίας ... ἐπιστήμη, see Arist. *Met.* 982 a 2-3.)

Extending the fundamental role of ἐναντία in the totality of being by applying contrariety to τὸ ὄν as such, yields a wisdom which is, as it were, a form of going beyond the boundaries of knowledge and being.

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[1] The proviso added by L-M regards TARÁN's commentary *ad loc.*: "That the clause ὥστε *μηδὲ* ὄν τι εἶναι τὸ ἓν αὐτὸ is merely an inference of Aristotle, which need not represent Speusippus' own opinion at all, ought to be clear from the grammar." (1981) 338 .

[2] In spite of Arist. *GC* 325 a 13-6 (...) ὑπερβάντες τὴν αἴσθησιν καὶ παριδόντες αὐτὴν ὡς τῷ λόγῳ δέον ἀκολουθεῖν, ἓν καὶ ἀκίνητον τὸ πᾶν εἶναί φασι, καὶ ἄπειρον ἔνιοι· τὸ γὰρ πέρας περαίνειν ἂν πρὸς τὸ κενόν., ὑπερβατός cannot be used here in the sense of 'exceeding the limits of perception' (cp. the rendering "transcendent", R-F), since in discussing the nature of τὸ ὄν we are outside the realm of perception anyway; see 8 b 15-6 and 9 b 14-5.

CHAPTER EIGHT

VIII.1 (8 b 10-20): *The process of acquiring knowledge testifies to the importance of differences in being: sense perception observes differences and looks for the causes involved; or rather, in less complicated cases, sense perception offers to the thinking faculty plausible suggestions with regard to the cause involved, in other cases it produces an ἀπορία, in which cases knowledge can be reached, with some effort, by an intuition of διάνοια. This paramount role of differences holds both between particulars and between universals (either species or genera).*

8 b 10-2 τὸ δὲ ὂν ... ζητεῖ·

The first and only chapter to start with something considered evident rather than with a problem. Here again, differences of 'being' are linked with different modes of knowing: πλεοναχῶς δ' ὄντος τὸ ἐπίστασθαι (9 a 10) parallels τὸ δ' ὂν ὅτι πολλαχῶς, φανερόν here; compare also τὸ ἐπίστασθαι ἄρα οὐκ ἄνευ διαφορᾶς τινος (8 b 16) following on the observation that *being* involves differences.

The assertion marked by **δέ**, whether this contrasts with μέν in the preceding sentence[1] or not, provides the chapter with a new start; see *ad* μέν, 8 b 8). The chapter may be considered to make a new start, although it takes as its point of departure the concept of 'being' (τὸ ὄν), whose application to the less highly valued ingredients of the cosmos was discussed in the two preceding chapters.

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[1] In that case the transition could be paraphrased as: "to count among the totality of being even τὸ μὴ ὂν etc. is going too far; but that τὸ ὂν applies to quite heterogeneous things is evident".

It should be noted that on this interpretation ἀλλ' ἥδε μὲν οἷον ὑπερβατός τις σοφία still constitutes the conclusion to the preceding argument; *contra* L-M, who make this sentence the beginning of the new section. Usener (1861) 270, on the other hand, surmises that the present sentence might belong at the end of the preceding chapter: ἡ γὰρ αἴσθησις κ.τ.λ., according to him, properly belongs between Chapters III and IV—where exactly remains obscure, since Usener supposes that 9 a 10 ff. πλεοναχῶς δ' ὄντος τοῦ ἐπίστασθαι κ.τ.λ. may have followed immediately upon the end of Chapter III (*l.c.*). In his edition of 1890 Usener seems to have reconciled himself to the "grosse Unordnung (...), die immerhin von einem eilfertigen Ordner und Diaskeuasten einschlägiglicher, aber zerstreuter Originalpapiere herrühren mag", (1861) 270. See R-F xxi-ii; Reale *ad loc.*

There is, however, also a more general continuity between this chapter and the preceding,[1] in the fact that the role of differences—whose existence has been said to be essential to the cosmos being as it is[2]—now appears to be essential to the process of acquiring knowledge, too.

Analysing terms used in many ways seems to have been common practice in the Peripatos.[3] The homonymy of τὸ ὄν in particular is discussed by Aristotle in, e.g., *Met.* 992 b 18 ff., 1003 a 33 ff., 1028 a 10 ff., 1089 a 7 ff.

In the present context evidence (**φανερόν**) for the manifold nature of being (**πολλαχῶς**), which was implied already in the preceding,[4] is provided by pointing out the essential role of differences in the process of acquiring knowledge (see *ad* γάρ, below). The different meanings of εἶναι, then, are relevant here insofar as they reflect different modes of being—which again are closely linked with the different parts of reality.

One might agree with REALE that this passage shows a significant difference as compared to Aristotle's treatment of the subject.[5] The difference,

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[1] See R-F xxii; cp. also L-M *ad loc.*: "La contrariété est en effet, selon Aristote, "une certaine différence (*Mét.*, IV, 2, 1004a21), à savoir la "plus grande différence" (*Mét.*, X, 4, 1055a4-5)."

[2] See οὐδὲ πάντα ὅμοια 8 b 1; οὐθὲν ... ὅμοιον 8 b 2-3.

[3] For different kinds of πολλαχῶς λέγεσθαι to be distinguished see LESZL (1970) 105 ff.; Th. himself is said to have written a treatise Περὶ τοῦ πολλαχῶς (or, Περὶ τῶν ποσαχῶς): 68.20 and 133, 134 FHS&G. See also *ad* 9 a 10.

[4] See esp. 8 a 15-9.

[5] "non si tratta affatto nè della distinzione dei celebri quattro significati dell' ὄν (essere come *categorie*, essere come *atto e potenza*, essere come *accidentalità* ed essere come *verità*), nè si tratta della distinzione delle diverse determinazioni categoriali (*sostanza, quantità, qualità*, ecc.) che, in Aristotele, fan sempre sequito alla formula τὸ ὂν λέγεται πολλαχῶς. *Tutto questo è indice di uno scadimento di interesse, nel Peripato post-aristotelico, del problema dell' essere.*" REALE 141-2.

See also REALE (1976) 131-2: "Invece la *dimensione ontologica risulta già interamente smarrita*, e in maniera pressoché totale. E si noti: non solo risulta smarrita la complessa problematica dei molteplici significati dell'essere e delle loro relazioni, ma risulta sostanzialmente smarrita addirittura la stessa tematica dell'essere. Il primo Peripato, dunque, non comprendeva già più il significato della domanda sull'essere: proprio quella domanda che Aristotele aveva detto essere l'eterna domanda della filosofia."

On the other hand, there seems to be no reason to suppose that the present passage would testify to an earlier, and presumably more primitive stage: *contra* L-M: "Il se pourrait au contraire que le passage de Théophraste témoigne d'un état inchoatif de la doctrine aristotélicienne", (*ad loc.*). The present introduction of the subject is firmly embedded in the context of the argument: see above. It seems, then, that no more can be said about it than that h.l. Th. is bringing forward the issue in a context which is quite different from the Aristotelian passages in which questions of homonymy are discussed.

however, apparently does not so much point to a loss of interest in the ontological dimension as to a less prominent concern with semantic analysis.[1]

γάρ introduces an indication for the statement τὸ δὲ ὂν ... φανερόν: that 'being' is said in many ways is clear if one pays attention to how the investigator on the subject proceeds, viz. by observing the differences between the several components of being and searching for the causes involved. γάρ possibly motivates the use of φανερόν in particular: the equivocity of being is 'easy to see', since we actually observe the differences involved.[2] Although **θεωρεῖν**[3] suggests that ἡ αἴσθησις refers to vision primarily, the other senses are not thereby excluded; differences in texture, smell, taste and especially in temperature may be just as relevant to our understanding of nature. Like ζητεῖν (see below), θεωρεῖν is ascribed more commonly to the investigator himself.[4] The presentation of both αἴσθησις and διάνοια (8 b 13) themselves as agents (or here, as agent and patient respectively) apparently serves Th.' attempt to clarify the process of acquiring knowledge.

The remark ἡ ... ζητεῖ presupposes the Academic and Peripatetic tenet that knowledge of a thing consists in knowledge of its 'causes'; see also 9 a 1-2, 9 a 4 with commentary *ad loc.* The limits set to the search for causes (and thus to knowledge) will be discussed in VIII.4, 9 b 1 ff.

The method of observing differences in acquiring knowledge was, of course, common practice in the Peripatos. Aristotle presents the search for causes as the next step in the following passage:

> Arist. *HA* 491 a 9-14 (...) ἵνα πρῶτον τὰς ὑπαρχούσας διαφορὰς καὶ τὰ συμβεβηκότα πᾶσι λάβωμεν. μετὰ δὲ τοῦτο τὰς αἰτίας τούτων πειρατέον εὑρεῖν. οὕτω γὰρ κατὰ φύσιν ἐστὶ ποιεῖσθαι τὴν μέθοδον, ὑπαρχούσης τῆς ἱστορίας τῆς περὶ ἕκαστον· περὶ ὧν τε γὰρ καὶ ἐξ ὧν εἶναι δεῖ τὴν ἀπόδειξιν, ἐκ τούτων γίγνεται φανερόν.

Differences between phenomena may be supposed to imply different causes:

> *Sud.* 11 Διότιμος δ' ἔλεγεν ὁ γυμναστὴς ὅτι τρεῖς τινὲς διαφοραὶ τῶν ἱδρώτων εἰσὶν ἀρχομένων τε καὶ μεσούντων καὶ ληγόντων· αὗται μὲν οὖν αἱ διαφοραὶ γίγνονται τῇ τε τῶν πόνων ἐπιστάσει καὶ τῇ τοῦ σώματος ἀλλοιώσει· δῆλον γὰρ ὡς ἀπὸ τῆς ἀνομοίας διαθέσεως ἀνόμοιον καὶ τὸ αἴτιον· ...

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[1] Except in 9 b 1 τοῖς πλεοναχῶς λεγομένοις, where a definition of τὸ ἐπίστασθαι is concerned.

[2] Cp. Arist. *Met.* 980 a 26-7 μάλιστα ποιεῖ γνωρίζειν ἡμᾶς αὕτη τῶν αἰσθήσεων (sc. τὸ ὁρᾶν) καὶ πολλὰς δηλοῖ διαφοράς.

[3] For θεωρεῖν as observation of διαφοραί see *ad* θεωρία, 4 a 3, p. 72 above.

[4] Cp. esp. μέχρι μὲν οὖν τινὸς δυνάμεθα δι' αἰτίου θεωρεῖν ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες, 9 b 8-9.

CP I.10.7 ἡ δὲ ἰδιότης εἴτε διὰ θερμότητα τούτων (evergreen plants which have the special characteristic of sprouting and fruiting early), εἴτε καὶ μανότητα καὶ ὑγρότητα, εἴτε καὶ διὰ ταύτας πάσας συμβαίνει τὰς αἰτίας, διαιρετέον αὐτὸ τοῦτο πρῶτον ἴσως εἰπόντας ποῖα θερμὰ καὶ ποῖα ψυχρὰ καὶ τοῖς ποίοις ληπτέον.

For this use of **ζητεῖν** compare

Plato *Ep.* VII 343 C 1 (...) δυοῖν ὄντοιν, τοῦ τε ὄντος καὶ τοῦ ποιοῦ τινος, οὐ τὸ ποιόν τι, τὸ δὲ τί, *ζητούσης εἰδέναι τῆς ψυχῆς*, τὸ μὴ ζητούμενον ἕκαστον τῶν τεττάρων (sc. ὄνομα, λόγος, εἴδωλον, ἐπιστήμη)[1] προτεῖνον τῇ ψυχῇ λόγῳ τε καὶ κατ' ἔργα, αἰσθήσεσιν εὐέλεγκτον τό τε λεγόμενον καὶ δεικνύμενον ἀεὶ παρεχόμενον ἕκαστον, ἀπορίας τε καὶ ἀσαφείας ἐμπίμπλησι πάσης ὡς ἔπος εἰπεῖν πάντ' ἄνδρα.

Here again the verb is used more properly of the investigator himself: see e.g.

CP II.13.3 κοινοῦ δὲ τοῦ πάθους ὄντος ὁμοίως ζῴων τε καὶ φυτῶν, κοινήν τινα δεῖ καὶ τὴν αἰτίαν ζητεῖν· ...

Still, ζητεῖν suggests that the process of sense perception involves some critical activity; this activity obviously exceeds the mere judgement that something is, e.g., white:[2] compare

Arist. *DA* 428 b 18-25 ἡ αἴσθησις τῶν μὲν ἰδίων ἀληθής ἐστιν ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος. δεύτερον δὲ τοῦ συμβεβηκέναι ταῦτα καὶ ἐνταῦθα ἤδη ἐνδέχεται διαψεύδεσθαι· ὅτι μὲν γὰρ λευκόν, οὐ ψεύδεται, εἰ δὲ τοῦτο τὸ λευκὸν ἢ ἄλλο τι, ψεῦδεται. τρίτον δὲ τῶν κοινῶν καὶ ἑπομένων τοῖς συμβεβηκόσιν, οἷς ὑπάρχει τὰ ἴδια· λέγω δ' οἷον κίνησις καὶ μέγεθος, ἃ συμβέβηκε τοῖς αἰσθητοῖς, περὶ ἃ μάλιστα ἤδη ἔστιν ἀπατηθῆναι κατὰ τὴν αἴσθησιν.

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[1] "[Es handelt] sich zunächst um die Erkenntniss innerhalb der Sinnenwelt", NEUMANN/KERSCHENSTEINER 209 n. 63 *ad loc.*

[2] For which see Arist. *DA* 426 b 8-12 ἑκάστη μὲν οὖν αἴσθησις τοῦ ὑποκειμένου αἰσθητοῦ ἐστίν, ὑπάρχουσα ἐν τῷ αἰσθητηρίῳ ᾗ αἰσθητήριον, καὶ *κρίνει* τὰς ὑποκειμένου αἰσθητοῦ διαφοράς, οἷον λευκὸν μὲν καὶ μέλαν ὄψις, γλυκὺ δὲ καὶ πικρὸν γεῦσις. ὁμοίως δ' ἔχει τοῦτο καὶ ἐπὶ τῶν ἄλλων. Also 432 a 15-9 ἐπεὶ δὲ ἡ ψυχὴ κατὰ δύο ὥρισται δυνάμεις ἡ τῶν ζῴων, *τῷ τε κριτικῷ, ὃ διανοίας ἔργον ἐστὶ καὶ αἰσθήσεως*, καὶ ἔτι τῷ κινεῖν τὴν κατὰ τόπον κίνησιν, περὶ μὲν αἰσθήσεως καὶ νοῦ διώρισθω τοσαῦτα, περὶ δὲ τοῦ κινοῦντος, τί ποτέ ἐστι τῆς ψυχῆς σκεπτέον, πότερον ...

Cp. MODRAK (1987) 223 n. 28: "Although commentators tend to treat as unproblematic Aristotle's claim that the objects of experience are particulars, it is actually quite puzzling, for many of Aristotle's examples of experiential judgments may be stated as universal propositions, for insatnce, "all chicken is wholesome" (cf. *E.N.* 1141b16-22). If this is an abbreviated version of a judgment having the form "chicken-eating contributed to Socrates' health, chicken-eating contributed to Callias' health and ...," it would be less puzzling."

In the present passage, however, Th. includes within αἴσθησις the more analytical activity of searching for causes—presumably by means of some sort of induction;[1] noticeably, notwithstanding his self-correction in the sequel (τάχα δ' ἀληθέστερον εἰπεῖν, next note), the activity of searching remains with αἴσθησις (see ζητοῦσα 8 b 13).

Th., then, may just be somewhat more outspoken than his predecessor about the role of αἴσθησις in the process of searching for causes; compare

> Arist. *An. Post.* 100 a 3 – b 5 ἐκ μὲν οὖν αἰσθήσεως γίνεται μνήμη, ὥσπερ λέγομεν, ἐκ δὲ μνήμης πολλάκις τοῦ αὐτοῦ γινομένης ἐμπειρία· αἱ γὰρ πολλαὶ μνῆμαι τῷ ἀριθμῷ ἐμπειρία μία ἐστίν. ἐκ δ' ἐμπειρίας ἢ ἐκ παντὸς ἠρεμήσαντος τοῦ καθόλου ἐν τῇ ψυχῇ, τοῦ ἑνὸς παρὰ τὰ πολλά, ὃ ἂν ἐν ἅπασιν ἓν ἐνῇ ἐκείνοις τὸ αὐτό, τέχνης ἀρχὴ καὶ ἐπιστήμης, ἐὰν μὲν περὶ γένεσιν, τέχνης, ἐὰν δὲ περὶ τὸ ὄν, ἐπιστήμης. οὔτε δὴ ἐνυπάρχουσιν ἀφωρισμέναι αἱ ἕξεις, οὔτ' ἀπ' ἄλλων ἕξεων γίνονται γνωστικωτέρων, ἀλλ' ἀπὸ αἰσθήσεως, οἷον ἐν μάχῃ τροπῆς γενομένης ἑνὸς στάντος ἕτερος ἔστη, εἶθ' ἑτέρος, ἕως ἐπὶ ἀρχὴν ἦλθεν. ἡ δὲ ψυχὴ ὑπάρχει τοιαύτη οὖσα οἵα δύνασθαι πάσχειν τοῦτο.
>
> ὃ δ' ἐλέχθη μὲν πάλαι, οὐ σαφῶς δὲ ἐλέχθη, πάλιν εἴπωμεν. στάντος γὰρ τῶν ἀδιαφόρων ἑνός, πρῶτον μὲν ἐν τῇ ψυχῇ καθόλου (καὶ γὰρ αἰσθάνεται μὲν τὸ καθ' ἕκαστον, ἡ δ' αἴσθησις τοῦ καθόλου ἐστίν, οἷον ἀνθρώπου, ἀλλ' οὐ Καλλίου ἀνθρώπου)· πάλιν ἐν τούτοις ἵσταται, ἕως ἂν τὰ ἀμερῆ στῇ καὶ τὰ καθόλου, οἷον τοιονδὶ ζῷον, ἕως ζῷον, καὶ ἐν τούτῳ ὡσαύτως. δῆλον δὴ ὅτι ἡμῖν τὰ πρῶτα ἐπαγωγῇ γνωρίζειν ἀναγκαῖον· καὶ γὰρ ἡ αἴσθησις οὕτω τὸ καθόλου ἐμποιεῖ.[2]

8 b 12-6 τάχα δ' ... ἐπὶ πλέον.

As elsewhere in the treatise, **τάχα δέ** followed by a comparative introduces a correction or modification on the part of the author; see τάχα δ' ἐφ' ὧν ἐνδέχεται κατ' ἀναλογίαν οἰκειότερον λέγειν, 9 a 21 and τάχα δ' ἐκεῖνο ἀληθέστερον, 9 b 13; see also *ad* τάχα μὲν οὖν ῥᾴδιον ..., χαλεπὸν δὲ ... 4 b 16. For **τάχα δ' ἀληθέστερον εἰπεῖν**, compare

> *CP* IV.2.2 σχεδὸν δὲ καὶ τὰ τῶν σιτωδῶν (sc. σπέρματα) διὰ παραπλησίας αἰτίας (sc. διαμένει)· ἢ γὰρ τῷ περιέχεσθαι πλείοσι χιτῶσιν ἡ διαμονή, καθάπερ ὁ κέγχρος (millet) ἢ τῷ λίπος ἔχειν, ὥσπερ τὸ σήσαμον, κ.τ.λ. (... ·) οὐχ ἧττον αἴτια ταῦτα (sc. open texture and sweetness) τῆς φθορᾶς, διὸ καὶ ὁ κύσμος καὶ ὁ ὦχρος τάχιστα κόπτεται. τάχα δ' ἀληθέστερον εἰπεῖν ὡς κατὰ

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[1] Cp. Speus., Fr. 75 Tarán. "Speusippus posits perception as an innate faculty capable of unerring discrimination of its objects precisely because it has a natural share in rational cognition. In perception, therefore, we already find some functions requiring abstraction, such as analysis, comparison, etc." TARÁN (1981) 434 *ad loc.*

[2] See MODRAK (1987) 169-71.

τὰς χώρας· ἐν Ἀπολλωνίᾳ γοῦν τῇ περὶ τὸν Ἰόνιον πολλά φασιν ἔτη διαμένειν τοὺς κυάμους, πολλὰ δὲ καὶ περὶ Κύζικον.

VI.7.7-8 αἱ δὲ καταμίξεις ὁτὲ μὲν τῶν ἔξω μιχθέντων, ὁτὲ δὲ τῶν αὐτοῦ, νοσήσαντός τινος καὶ πλεονάσαντος· τάχα δ' ἀληθέστερον εἰπεῖν ὅτι κινηθέντος τινὸς καὶ διαφθαρέντος ὑπὸ τῶν ἐκτός, οὕτως γὰρ καὶ ἡ τῶν περικαρπίων φθορά, καὶ αὐτῶν τῶν ὑγρῶν (οἷον οἴνου γάλακτος).

This modification seems to be called forth by the impression someone might have that ζητεῖν, the process of searching for causes, is a single, undifferentiated activity on the part of perception: as it is, sense-perception *in some cases* (τὰ μέν) seeks and suggests its findings to **διάνοια**, which may be conceived as a different part or aspect of the investigator's soul,[1] *while in other cases* (τὰ δέ) it produces instructive ἀπορίαι with regard to the causes concerned, which again invite further searching, presumably on the part of διάνοια (ζητούντων ἐπὶ πλέον, 8 b 15-6).

Cp. ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες, 9 b 9 below (with note, pp. 452 f.); also

301B FHS&G (= Clem. Alex. *Strom.* 2.2 9.5) Θεόφραστος δὲ τὴν αἴσθησιν ἀρχὴν εἶναι πίστεώς φησιν· ἀπὸ γὰρ ταύτης αἱ ἀρχαὶ πρὸς τὸν λόγον τὸν ἐν ἡμῖν καὶ τὴν διάνοιαν ἐκτείνονται.

For the use of **ὑποβάλλειν**[2] with an impersonal subject compare

Arist. *Pol.* 1342 b 22 ἔστι δὲ καὶ ταῦτα ὡρισμένα ταῖς ἡλικίαις, οἷον τοῖς ἀπειρηκόσι διὰ χρόνον οὐ ῥᾴδιον ᾄδειν τὰς συντόνους ἁρμονίας, ἀλλὰ τὰς ἀνειμένας ἡ φύσις ὑποβάλλει τοῖς τηλικούτοις ("but to persons of that age nature suggests the relaxed harmonics" tr. RACKHAM).

Epicur. *Ep.* II.90 shows the same image that we have here:[3]

ἥλιός τε καὶ σελήνη καὶ τὰ λοιπὰ ἄστρα ⟨οὐ⟩ καθ' ἑαυτὰ γενόμενα ὕστερον ἐμπεριελαμβάνετο ὑπὸ τοῦ κόσμου, ἀλλ' εὐθὺς διεπλάττετο καὶ αὔξησιν ἐλάμβανεν κατὰ προσκρίσεις καὶ δινήσεις λεπτομερῶν τινων φύσεων, ἤτοι πνευματικῶν ἢ πυροειδῶν ἢ τὸ συναμφότερον· καὶ γὰρ ταῦτα οὕτως ἡ αἴσθησις ὑποβάλλει.

What seems to be peculiar to the διάνοια is the recognition of the one true cause: only when this is achieved can there be any question of ἐπιστήμη.

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[1] See e.g. Arist. *DA* 432 a 15 ff., p. 396 n. 2 above; also next page, n. 1.

[2] "*suggest, whisper,* as a prompter does"; see e.g. Plato *Gorgias* 491 A 6: ἢ οὔτε ἐμοῦ ὑποβάλλοντος ἀνέξῃ οὔτ' αὐτὸς ἐρεῖς; LSJ III s.v.

[3] Epicurus' use of ἐπιβολή (τῆς διανοίας) seems to involve a similar metaphor, viz. that of the διάνοια 'hitting' the suggestions made by the senses.

Since here, as in 5 b 9-10, διάνοια is probably conceived as the supreme faculty (or aspect) of soul,[1] the act metaphorically referred to as ὑποβάλλειν is likely to involve no great (metaphorical) effort, since soul takes part in the process of perception anyway.[2]

Two groups of suggestions provided to διάνοια by sense perception are distinguished, differing apparently in the plausibility of the suggestions.[3]

τὰ μέν, then, might refer to suggestions concerning those bodily conditions and qualities which present themselves readily to sense perception as potential causes. For instance, using as an example Th.' account in *CP* I.10.7 (see p. 396 above), our perception (or the investigator by means of his senses) observes differences between evergreen plants, and tries to find out what it is that makes evergreen plants belong to some particular type, namely that of those that sprout & fruit early. Whether this decision is based on examination of (e.g.) its leaves or not, αἴσθησις, which is presumably that specific δύναμις of soul which registers[4] the impressions conveyed by the senses,[5] forms a notion of what may be the cause of this particular characteristic: θερμότης, ὑγρότης etc. These conceptions are communicated to the διάνοια to be either confirmed or rejected; if confirmed, they from now on form part of ἐπιστήμη.[6]

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[1] The distinction between διάνοια and νοῦς amounts to a difference in aspect according to FHS&G 301A.28-33 (= Sext. *Adv. Math.* 7.222 f.): τὸ γὰρ δὴ τοιοῦτο κίνημα τῆς ψυχῆς (sc. τὸ τῆς λογικῆς φαντασίας) κατὰ διαφόρους ἐπιβολὰς οἱ Περιπατητικοὶ τῶν φιλοσόφων διάνοιαν τε καὶ νοῦν ὀνομάζουσι, κατὰ μὲν τὸ δύνασθαι διάνοιαν, κατὰ δὲ ἐνέργειαν νοῦν· ὅταν μὲν γὰρ δύνηται τοῦτον ποιεῖσθαι τὸν ἀναπλασμὸν ψυχή, τουτέστιν ὅταν πεφύκῃ, διάνοια καλεῖται, ὅταν δὲ ἐνεργητικῶς ἤδη ποιῇ, νοῦς ὀνομάζεται. Although the present use of διάνοια may seem to be in accordance with this distinction (and, as will be argued below, τι φῶς might represent νοῦς), this treatise does not yield any clear-cut distinction: see 9 b 14-5, where νοῦς relates to θεωρία as the organ or instrument (i.e., the capacity) to the activity itself.

[2] It may be noted that in the obviously different context of Plato *Ep.* VII 343 C 3 ff. (p. 396) both soul and the senses are subject to the—in this case false—impressions provided by (παρεχόμενον, cp. προτεῖνον) the external objects.

[3] Cp. 9 b 8-9: μέχρι μὲν οὖν τινος δυνάμεθα δι' αἰτίου θεωρεῖν ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες.

[4] And selects between?

[5] See *ad* 5 b 5-7.

[6] See 301B FHS&G, above.

"La sensation est la pourvoyeuse de la pensée discursive"; "le sensible et l'intelligible, à la fois distincts et solidaires dans la réalité, composent également dans l'esprit un ordre de continuité hiérarchique, celui de l'antérieur et du postérieur; le degré inférieur du savoir s'ordonne au degré supérieur qui le suppose en le dépassant", Barbotin (1954) 76.

The one activity of αἴσθησις is called 'simply seeking' (**ἁπλῶς**): as in 5 a 9 ἁπλῶς ἐξαίρων, the adverb is used in a non-technical sense: "without more ado".[1]

With the other type of suggestions (**τὰ δέ**), however, the process proceeds less smoothly, presumably either because the differences involved are not sufficiently clear—compare

> Arist. *EN* 1137 a 33 – b 8: οὔτε γὰρ ὡς ταὐτὸν ἁπλῶς οὔτ' ὡς ἕτερον τῷ γένει φαίνεται σκοπουμένοις (sc. τὸ ἐπιεικές and τὸ δίκαιον)· καὶ ὅτε μὲν τὸ ἐπιεικὲς ἐπαινοῦμεν καὶ ἄνδρα τὸν τοιοῦτον, ὥστε καὶ ἐπὶ τὰ ἄλλα ἐπαινοῦντες μεταφέρομεν ἀντὶ τοῦ ἀγαθοῦ, τὸ ἐπιεικέστερον ὅτι βέλτιον δηλοῦντες· ὅτε δὲ τῷ λόγῳ ἀκολουθοῦσι φαίνεται ἄτοπον εἰ τὸ ἐπιεικὲς παρὰ τὸ δίκαιόν τι ὂν ἐπαινετόν ἐστιν· ἢ γὰρ τὸ δίκαιον οὐ σπουδαῖον, ἢ τὸ ἐπιεικὲς οὐ δίκαιον, εἰ ἄλλο· ἢ εἰ ἄμφω σπουδαῖα, ταὐτόν ἐστιν. ἡ μὲν οὖν ἀπορία σχεδὸν συμβαίνει διὰ ταῦτα περὶ τὸ ἐπιεικές, ἔχει δ' ἅπαντα τρόπον τινὰ ὀρθῶς καὶ οὐδὲν ὑπεναντίον ἑαυτοῖς· κ.τ.λ.
>
> *HP* I.1.1 αὐτὸ γὰρ τοῦτο πρῶτον οὐχ ἱκανῶς ἀφώρισται τὰ ποῖα δεῖ μέρη καὶ μὴ μέρη καλεῖν, ἀλλ' ἔχει τινὰ ἀπορίαν.

—or because sense perception of the particular entities involved is difficult or even impossible (as it is with ἀρχαί in particular):

> 6 a 5-8 τόδε δ' ἄν τις ἴσως ἀπορήσειεν πρὸς αὐτὸν τὸν πρωτὸν οὐρανὸν ἀναφέρων, πότερον ἡ περιφορὰ τῆς οὐσίας ἐστιν αὐτοῦ (cp. also 10 a 19-21);
>
> 6 b 24-6 τάχ' ἂν ἀπορήσειέν τις, πότερον ἀμόρφους (τὰς ἀρχὰς) καὶ οἷον δυναμικάς ..., ἢ μεμορφωμένας ...

In any case the search for causes apparently is somehow frustrated, so that διάνοια is presented with an impasse or ἀπορία. For the notion of an ἀπορία on the part of διάνοια, see Arist. *Met.* 995 a 24 – b 2 quoted below.

For **ἐνεργάζεσθαι** "to produce an internal effect", compare

> Gorgias *Hel.* 18-9 πολλὰ δὲ πολλοῖς πολλῶν ἔρωτα καὶ πόθον *ἐνεργάζεται* πραγμάτων καὶ σωμάτων. εἰ οὖν τῷ τοῦ 'Αλεξάνδρου σώματι *τὸ* τῆς 'Ελένης *ὄμμα* ἡσθὲν προθυμίαν καὶ ἅμιλλαν ἔρωτος *τῇ ψυχῇ παρέδωκε*, τί θαυμαστόν;

This ἀπορία is explained, in accordance with the etymology of the term, as an inability to advance, apparently on the part of the διάνοια. For a similarly metaphorical use of **προβαίνειν**[2] cp. e.g. Eur. *Hipp.* 342 ποῖ προβήσεται λόγος;

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[1] Cp. Plato *Leg.* 955 D 3 ὁ δὲ μὴ πειθόμενος ἁπλῶς τεθνάτω ἁλοὺς τῇ δίκῃ.

[2] "of narrative, argument, action, events" LSJ I.3 s.v.

For the present use, compare

Plato *Tht.* 187 A 3 ὅμως δὲ τοσοῦτόν γε προβεβήκαμεν, ὥστε μὴ ζητεῖν αὐτὴν ἐν αἰσθήσει τὸ παράπαν ἀλλ' ἐν ἐκείνῳ τῷ ὀνόματι, ὅτι ποτ' ἔχει ἡ ψυχή, ὅταν αὐτὴ καθ' αὑτὴν πραγματεύηται περὶ τὰ ὄντα.

Ps.-Arist. *MM* 1183 a 39 ἀλλ' ἴσως τούτῳ τἀγαθῷ ἀρχῇ χρησάμενος ὑπὲρ τῶν καθ' ἕκαστα, ἐκ τούτου προβάς, ἐρεῖ.

Although διάνοια is unable to proceed from these (i.e., the second type of) suggestions (τὰ δ(έ), 8 b 13), and knowledge cannot be attained in this way, the intellectual impasse is somehow overcome; this is expressed as light (**τι φῶς**) appearing in the darkness (**ἐν τῷ μὴ φωτί**).[1]

The step from visual to intellectual clarity is a small one:[2] the light of day is what makes us see[3] and thus reveals the truth.[4] This is apparently at the base of the analogy between light and mind invoked by Aristotle, *Rhet.* 1411 b 12: τὸν νοῦν ὁ θεὸς φῶς ἀνῆψεν ἐν τῇ ψυχῇ, followed by the explanation ἄμφω γὰρ δηλοῖ τι.[5] Accordingly, a 'mental light', i.e. a state of enlightenment, may be found in philosophy (φῶς ἐν τῷ φιλοσοφεῖν ... ποιοῦσαν, Plut. *Mor.* 77 D, quoted below).

In the present context, then, τὸ μὴ φῶς might express the obscurity of the problem as well as the darkness in the mind of the explorer, these two again being connected.

For the negative expression τὸ μὴ φῶς[6] cp. Plato *Gorg.* 459 B 2 ὁ δὲ μὴ ἰατρός γε δήπου ἀνεπιστήμων ὧν ὁ ἰατρὸς ἐπιστήμων, *Charm.* 167 D 5 τῶν μὴ ἀκοῶν, cp. C 10 (τῶν) μὴ ὄψεων; Aristoph. *Eccl.* 115 δεινὸν δ' ἐστὶν ἡ μὴ 'μπειρία.

The non-actuality expressed by μή resides in the general character of the statement: cp. the prospective-iterative subjunctive of κἂν μὴ δύνηται. The negative phrase τὸ μὴ φῶς rather than e.g. ὁ σκότος, may have been chosen because it suggests that what is said applies in all relevant cases ("some light dawns *where there was none*").[7]

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[1] For the use of the light metaphor to describe intellectual clarity see Bultmann (1948); also Tarrant (1960).

[2] See also *ad* θεωρία, 4 a 3.

[3] Arist. *Sens.* 447 a 11 τὸ γὰρ φῶς ποιεῖ τὸ ὁρᾶν.

[4] Cp. Eur. *IT* 1026 κλεπτῶν γὰρ ἡ νύξ, τῆς δ' ἀληθείας τὸ φῶς.

[5] Cp. also Arist. *DA* 430 a 15-7 (νοῦς) ὡς ἕξις τις, οἷον τὸ φῶς· τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὄντα χρώματα ἐνεργείᾳ χρώματα (quoted *ad* 7 b 22-3, p. 348).

[6] See K-G II.197: "(Ein abstraktes Substantiv wird) durch μή (negiert), wenn es als reiner Abstraktbegriff, als blosse *Vorstellung* aufgefasst werden soll oder einen Bedingungssatz vertritt".

[7] *Contra* L-M: "L'expression recherchée φῶς ἐν τῷ μὴ φωτί pourrait cacher une citation poétique." (*ad loc.*).

For an ἀπορία as the absence of light compare

Plato *Leg.* 836 E 5 – 837 A 4 πῶς οὖν φαμεν ἀληθὲς τοῦτο εἶναι; τὴν τῆς φιλίας τε καὶ ἐπιθυμίας ἅμα καὶ τῶν λεγομένων ἐρώτων φύσιν ἰδεῖν ἀναγκαῖον, εἰ μέλλει τις ταῦτα ὀρθῶς διανοηθήσεσθαι· δύο γὰρ ὄντα αὐτά, καὶ ἐξ ἀμφοῖν τρίτον ἄλλο εἶδος, ἓν ὄνομα περιλαβὸν πᾶσαν ἀπορίαν καὶ σκότον ἀπεργάζεται.

Plut. *Mor.* 77 D, referring to Hes. *Erg.* 289 ff. τῆς δ' ἀρετῆς ἱδρῶτα θεοὶ προπάροιθεν ἔθηκαν / ἀθάνατοι· ... / ἐπὴν δ' εἰς ἄκρον ἵκηται, / ῥηδίη δήπειτα πέλει, χαλεπή περ ἐοῦσα.: (...) ῥᾳδίαν καὶ λείαν καὶ δι' εὐπετείας εἶναι τὴν ὁδόν, οἷον ἐκλεαινομένην τῇ ἀσκήσει καὶ φῶς ἐν τῷ φιλοσοφεῖν καὶ λαμπρότητα ποιοῦσαν ἐξ ἀπορίας καὶ πλάνης καὶ μεταμελειῶν, αἷς προτυγχάνουσιν οἱ φιλοσοφοῦντες τὸ πρῶτον, ὥσπερ οἱ γῆν ἀπολιπόντες ἣν ἴσασι, μηδέπω δὲ καθορῶντες ἐφ' ἣν πλέουσι.,

which seems to refer to the enlightenment found in the practice of philosophy and the concomitant gain in clarity in the problems involved.

H.l. there is little to choose between the two possibilities. On the one hand τὸ μὴ φῶς may seem to refer to a lack of clarity in the mind of the investigator,[1] but it may just as well be taken to refer to the obscurity of the problem, "*the* non-light",[2] and this reading is perhaps favoured by the expression **ἐμφαίνεταί** τι φῶς: cp. the application of ἐμφαίνεσθαι "become visible", "appear" to reflections of objects in water or in a mirror,[3] as in

Arist. *Meteor.* 345 b 26-7 ἔτι δὲ νύκτωρ ἐν ὕδατι καὶ τοῖς τοιούτοις ἐνόπτροις τὸ μὲν γάλα ἐμφαίνεται θεωροῦσιν—also 372 a 33, and elsewhere;

Sens. 438 a 12 ἄτοπον δὲ καὶ τὸ μὴ ἐπελθεῖν αὐτῷ ἀπορῆσαι διὰ τί ὁ ὀφθαλμὸς ὁρᾷ μόνον, τῶν δ' ἄλλων οὐδὲν ἐν οἷς ἐμφαίνεται τὰ εἴδωλα.

Or, outside the sphere of physics:

Xen. *Cyr.* I.4.3 ἀλλ' ὥσπερ γὰρ ἐν σώματι, ὅσοι νέοι ὄντες μέγεθος ἔλαβον, ὅμως ἐμφαίνεται τὸ νεαρὸν αὐτοῖς ὃ κατηγορεῖ τὴν ὀλιγοετίαν, οὕτω καὶ Κύρου ἐκ τῆς πολυλογίας οὐ θράσος διεφαίνετο, ἀλλ' ἁπλότης καὶ φιλο-

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[1] Thus R-F: "in *our* non-light" (italics added); so TRICOT; REALE/CATAN.

The genetive ζητούντων in any case does not necessitate this interpretation; see K-G II.2.81: "Der Genetiv des Partizips steht bisweilen ohne Substantiv, wenn dasselbe aus dem Zusammenhange leicht ergänzt werden kann, oder wenn es in dem Partizipe selbst liegt, wo man ἀνθρώπων, πραγμάτων u. dgl. zu ergänzen pflegt, aber ohne Grund, da aus dem Gedankenzusammenhange selbst hervorgeht, dass das Partizip nur Menschen oder bestimmte Sachen, welche der Zusammenhang angiebt, bezeichnen kann, ..." Also HINDENLANG (1910) 78.

E.g. Hom. *Il.* 15.190 ἤτοι ἐγὼν ἔλαχον πολιὴν ἅλα ναιέμεν αἰεὶ / παλλομένων, Ἀΐδης δ'...; *HP* IV.2.5 τὴν δὲ σάρκα γλυκεῖαν σφόδρα καὶ ἡδεῖαν καὶ εὔπεπτον· οὐδὲν γὰρ ἐνοχλεῖ πολὺ προσενεγκαμένων. ("for it does no hurt if one eats it in quantity", tr. HORT).

[2] Cp. REALE: "nell'oscurità dalla quale si cerca di uscire".

[3] "ἐμφαίνεσθαι ist ein einfaches φαίνεσθαι, mit blosser Angabe, *wo* die Erscheinung stattfindet", SCHMIDT III.408.

στοργία, ὥστ' ἐπεθύμει ἄν τις ἔτι πλείω αὐτοῦ ἀκούειν ἢ σιωπῶντι παρεῖναι.

Arist. *Pol.* 1254 a 30 (about composite things) ἐν ἅπασιν ἐμφαίνεται τὸ ἄρχον καὶ τὸ ἀρχόμενον, ...

The light in question, then, consists in clarity and in a (partial) solution of the problem—which in its turn leads to or implies a clarification in the mind of the observer. When we continue our search we find light where there was none. What kind of light or clarity is it that Th. has in mind?

This question is connected with the interpretation of **δι' ἧς** in 8 b 14. Given that ἀπορία is the obvious antecedent, the problem seems somehow to be made the basis of its own clarification. Seeing that an immediate causal or instrumental connection ("through", "by means of") is unlikely, διά followed by the genetive seems here to indicate a less immediate type of connection ("owing to").[1] Compare e.g.

CP I.13.4 ἀλογία μὲν γὰρ δή τις φαίνεται διὰ τούτων.

Lap. 6 αἱ μὲν οὖν (sc. διαφοραί) κατὰ τὰ χρώματα καὶ τὰς σκληρότητας καὶ μαλακότητας καὶ λειότητας καὶ τἆλλα τὰ τοιαῦτα, δι' ὧν τὸ περιττόν, πλείοσιν (sc. λίθοις) ὑπάρχουσι καὶ ἐνίοις γε κατὰ τόπον ὅλον.

The role which Th. attributes to ἀπορία in the attainment of knowledge is presumably that of a necessary condition: only if there is an actual ἀπορία (i.e. if the difficulty has been expressed, explicitly or just mentally, as a problem) does further inquiry (cp. ζητούντων ἐπὶ πλέον) make sense and may a solution present itself: compare

Arist. *Met.* 995 a 24 – b 2 ἀνάγκη πρὸς τὴν ἐπιζητουμένην ἐπιστήμην ἐπελθεῖν ἡμᾶς πρῶτον περὶ ὧν ἀπορῆσαι δεῖ πρῶτον· ταῦτα δ' ἐστὶν ὅσα τε περὶ αὐτῶν ἄλλως ὑπειλήφασί τινες, κἂν εἴ τι χωρὶς τούτων τυγχάνει παρεωραμένον. ἔστι δὲ τοῖς εὐπορῆσαι βουλομένοις προὔργου τὸ διαπορῆσαι καλῶς· ἡ γὰρ ὕστερον εὐπορία λύσις τῶν πρότερον ἀπορουμένων ἐστί, λύειν δ' οὐκ ἔστιν ἀγνοοῦντας τὸν δεσμόν, ἀλλ' ἡ τῆς διανοίας ἀπορία δηλοῖ τοῦτο περὶ τοῦ πράγματος· ᾗ γὰρ ἀπορεῖ, ταύτῃ παραπλήσιον πέπονθε τοῖς δεδεμένοις· ἀδύνατον γὰρ ἀμφοτέρως προελθεῖν εἰς τὸ πρόσθεν.

διὸ δεῖ τὰς δυσχερείας τεθεωρηκέναι πάσας πρότερον, τούτων τε χάριν καὶ διὰ τὸ τοὺς ζητοῦντας ἄνευ τοῦ διαπορῆσαι πρῶτον ὁμοίους εἶναι τοῖς ποῖ δεῖ βαδίζειν ἀγνοοῦσι, καὶ πρὸς τούτοις οὐδὲ πότε⟨ρον⟩ τὸ ζητούμενον εὕρηκεν ἢ μὴ γιγνώσκειν· τὸ γὰρ τέλος τούτῳ μὲν οὐ δῆλον, τῷ δὲ προηπορηκότι δῆλον.[2]

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[1] This is not unparalleled in post-classical Greek; in classical Greek this connection is expressed by διά followed by the accusative): see Stevens (1936) 206 f.

[2] Cp. the enlightenment to be achieved in philosophy as described by Plutarch *Mor.* 77 D, above.

The appearance of light where matters or more precisely the causes searched for, are obscure, thus seems to depend upon two factors: (1) the problem as such must have been made clear, and (2) the investigator must have continued the inquiry: the point seems to be that only under these circumstances we are able to recognize the solution when we meet it. Cp. 9 b 13-6 with commentary.

τι φῶς, then, stands for the solution of the problem in question, which, again, from a different point of view could be described as some particular insight on the part of the investigator; rather than leaving the light indefinite, the addition of τι[1] here apparently indicates that *some particular* light is meant, illuminating the ἀπορία in question.[2] Compare

> Plato *Ep.* VII 341 D 1 ῥητὸν γὰρ οὐδαμῶς ἐστιν ὡς ἄλλα μαθήματα, ἀλλ' ἐκ πολλῆς συνουσίας γιγνομένης περὶ τὸ πρᾶγμα αὐτὸ καὶ τοῦ συζῆν ἐξαίφνης, οἷον ἀπὸ πυρὸς πηδήσαντος ἐξαφθὲν φῶς, ἐν τῇ ψυχῇ γενόμενον αὐτὸ ἑαυτὸ ἤδη τρέφει.[3]

The second condition under which some solution may present itself to us, viz. that further inquiries into the subject are made (**ζητούντων**[4] **ἐπὶ πλέον**) is left without further specification; but in this particular context it is likely that this activity would consist in a *search for causes* as it did at the previous stage of the process (8 b 11-2 τὰς αἰτίας ζητεῖ), but presumably no longer as processing new information provided by the senses: the activity now seems to be on the part of the intellectual faculty as such. See also 9 b 8-16.

Taking into account the next remark (τὸ ἐπίστασθαι ... τινος, see next note), one may surmise that here again the activity referred to consists in the 'observation' of differences as well as the search for causes, both on the part of διάνοια. This at least would be in accordance with the possibility that the solution of the problem presenting itself in each case consists in a productive analogy, i.e. an analogy which enables us to account for phenomena previously obscure.[5]

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[1] Cp. BONITZ τις s.v., 763 a 31-5: "peculiaris philosophicae dictioni est usus pron indef ad significandam τὴν ἀτομότητα ... ita quidem ut vel significetur τὸ καθ' ἕκαστον, vel εἶδός τι distinctum ab universo genere." E.g. Arist. *Rhet.* 1402 a 8-9 τὸ μὴ ἁπλῶς εἰκὸς ἀλλὰ τὶ εἰκός, *Met.* 1028 a 30 τὸ πρώτως ὂν καὶ οὐ τὶ ὂν ἀλλ' ὂν ἁπλῶς.

[2] See SCHMIDT I.564 ff. For this reason I now reject the translation "some light yet dawns in the darkness" (VAN RAALTE (1988) 195) which does not require the 'darkness' to be interpreted as referring to a particular problem.

[3] "Es handelt sich dabei nicht um eine mysthische Erleuchtung ... sondern um das Ergebnis eines strengen geistigen Denkprozesses, durch den gleich einem Licht die Erkenntnis aufleuchtet", NEUMANN/KERSCHENSTEINER *ad loc.*

[4] For the genitive see p. 402 n. 1 above.

[5] Cp. VAN RAALTE (1988) 195 f.; see also 9 a 21-2 κατ' ἀναλογίαν οἰκειότερον λέγειν, ἢ αὐτῷ τῷ ἀγνώστῳ. The intuitive grasping of a relevant analogy might throw some more light upon the function Th. reportedly ascribed to φαντασία: see HUBY (1989).

The present process, then, reminds us of the Aristotelian distinction between different kinds of ἕξεις κατὰ τὴν διάνοιαν, viz. δόξα, λογισμός, ἐπιστήμη, and νοῦς (cp. h.l. διάνοια):

Arist. *An. Post.* 100 b 5-17 ἐπεὶ δὲ τῶν περὶ τὴν διάνοιαν ἕξεων αἷς ἀληθεύομεν αἱ μὲν ἀεὶ ἀληθεῖς εἰσιν, αἱ δὲ ἐπιδέχονται τὸ ψεῦδος, οἷον δόξα καὶ λογισμός, ἀληθῆ δ' ἀεὶ ἐπιστήμη καὶ νοῦς, καὶ οὐδὲν ἐπιστήμης ἀκριβέστερον ἄλλο γένος ἢ νοῦς, αἱ δ' ἀρχαὶ τῶν ἀποδείξεων γνωριμώτεραι, ἐπιστήμη δ' ἅπασα μετὰ λόγου ἐστί, τῶν ἀρχῶν ἐπιστήμη μὲν οὐκ ἂν εἴη, ἐπεὶ δ' οὐδὲν ἀληθέστερον ἐνδέχεται εἶναι ἐπιστήμης ἢ νοῦν, νοῦς ἂν εἴη τῶν ἀρχῶν, ἔκ τε τούτων σκοποῦσι καὶ ὅτι ἀποδείξεως ἀρχὴ οὐκ ἀπόδειξις, ὥστ' οὐδ' ἐπιστήμης ἐπιστήμη. εἰ οὖν μηδὲν ἄλλο παρὰ ἐπιστήμην γένος ἔχομεν ἀληθές, νοῦς ἂν εἴη ἐπιστήμης ἀρχή. καὶ ἡ μὲν ἀρχὴ τῆς ἀρχῆς εἴη ἄν, ἡ δὲ πᾶσα ὁμοίως ἔχει πρὸς τὸ πᾶν πρᾶγμα.

Th.' presentation seems to deviate from Aristotle's distinction insofar as it views the different stages as more or less equally important steps in one and the same process leading towards ἐπιστήμη, which differ in proportion to the difficulty of the matter at issue. Even if the present appearance of light could be justly identified with νοῦς,[1] νοῦς seems to have lost something of its unique and so to speak uncomparable status.[2] See also 9 b 13-6.[3]

Th.' point, then, seems to be that with some objects, at some stage in the process of acquiring knowledge at which αἴσθησις is no longer of any avail, a 'jumping to conclusions' on the part of the discursive faculty of soul is required.[4]

8 b 16-20 τὸ ἐπίστασθαι ... ἐάν τ' εἴδη.

As may be inferred from the preceding (**ἄρα**),[5] both when the suggestions presented to διάνοια produce an ἀπορία and when they do not, the point of departure in acquiring knowledge is the observation of some sort of differ-

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[1] But see p. 402 above.

[2] See 7 b 22-3 with note *ad loc.*

[3] τὰ φωτεινότατα (9 b 13) presumably refers the objects of φῶς implied here.

[4] Cp. Prisc. *Metaphr.* 1.9, 4.18-22 εἰς ἔνιά γε μὴν ἐκ τῶν αἰσθητῶν ἡ διάνοια ἀναγομένη αὐτὴ καθ' αὑτὴν λογίζεται οὐκέτι ὄντα τῇ αἰσθήσει καταληπτά, ὡς ὅταν τὴν οὐσίαν γνωρίζῃ τῶν αἰσθητῶν, and his subsequent discussion of the question ἀλλ' εἰ καθ' ὁμοίωσιν ἡ γνῶσις, πῶς μὴ πάσχουσα ὑπὸ τῶν ἐν τοῖς αἰσθητοῖς ὁμοιοῦται πρὸς αὐτὰ ἡ διάνοια; (1.10, 4.22 ff.); also 2.2, 24.10-20.

[5] Cp. 584A.126 FHS&G ἀφεκτέον ἄρα τῶν ζῴων ἐν ταῖς θυσίαις; 184.43 FHS&G φθαρτὸς ἄρα ὁ κόσμος ἐστίν.

According to EUCKEN (1866) 51, in *HP* the frequency of ἄρα as a concluding particle recedes in favour of the use in phrases such as εἰ μὴ ἄρα or πλὴν εἰ ἄρα. In *Met.* the present case is the only certain instance of its solitary use (but see *ad* 6 a 17), against five instances of εἰ μὴ ἄρα and a single instance of εἰ ἄρα and ὡς ἄρα each.

ence (διαφορά τις). The presence of a difference among objects is a necessary condition for knowledge on any subject.

γάρ justifies the general nature of the preceding statement, with which Th. seems to deviate from his predecessor. There is a difference *both* (... **τε** ... **τε**) when there is merely a plurality of individual entities, being 'individual' insofar as they are different from ('other than') one another (**ἕτερα ἀλλήλων**), *and* in the case of universals: while they cover a plurality of individual entities, they (**ταῦτα**, i.e, presumably, τὰ καθόλου) themselves are different too.

According to Aristotle ἕτερον is said of everything which is not the same:[1] see

> Arist. *Met.* 1054 b 22-31 τὸ μὲν οὖν ἕτερον καὶ ταὐτὸν οὕτως ἀντίκειται, διαφορὰ δὲ καὶ ἑτερότης ἄλλο. τὸ μὲν γὰρ ἕτερον καὶ οὗ ἕτερον οὐκ ἀνάγκη εἶναι τινὶ ἕτερον· πᾶν γὰρ ἢ ἕτερον ἢ ταὐτὸ ὅ τι ἂν ᾖ ὄν· τὸ δὲ διάφορον τινὸς τινὶ διάφορον, ὥστε ἀνάγκη ταὐτό τι εἶναι ᾧ διαφέρουσιν. τοῦτο δὲ τὸ ταὐτὸ γένος ἢ εἶδος· πᾶν γὰρ τὸ διαφέρον διαφέρει ἢ γένει ἢ εἴδει, γένει μὲν ὧν μὴ ἔστι κοινὴ ἡ ὕλη μηδὲ γένεσις εἰς ἄλληλα, οἷον ὅσων ἄλλο σχῆμα τῆς κατηγορίας, εἴδει δὲ ὧν τὸ αὐτὸ γένος (λέγεται δὲ γένος ᾧ ἄμφω τὸ αὐτὸ λέγονται κατὰ τὴν οὐσίαν τὰ διάφορα).

It seems that Th. at least in the present context diverges from this view in that he qualifies purely numerical otherness, too, as 'difference'. This may testify to an interest in individual entities, which might bear individual characteristics or even show anomalies that do not fit in with any kind of classification, these characteristics providing one more instance of the all-important role of διαφοραί in the process of acquiring knowledge.

With **ἔν τε τοῖς καθόλου** Th. adds that between universals, too, whether genera or species, there must necessarily obtain differences. ἐν (τοῖς καθόλου) h.l. "in the case of"[2]—a metaphorical variety of the local use which is remarkably frequent in this treatise (which seems to testify to a scrupulousness on the part of the author in making explicit the range or level to which each statement applies): e.g. 7 a 1 φαίνεται δὲ καὶ ἐν ταῖς λοιπαῖς σχεδὸν ἔχειν οὕτω, 7 a 2 καθάπερ ἐν γραμματικῇ κ.τ.λ., 7 a 13 ἐν δὲ ταῖς ἀρχαῖς μηθὲν τοιοῦτον, 7 a 17 λαμβάνουσιν ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις, 7 a 21-2 καὶ ἐν ζῴοις καὶ φύτοις καὶ ἐν αὐτῇ πομφόλυγι, 7 b 9 ἐν δὲ ταῖς

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[1] Bonitz διαφορά 1 s.v., 192 a 23-5: "sensu logico ... latius quam διαφορὰ patet ἑτερότης ..., nam πρὸς τὰ ἔξω τοῦ γένους οὐκ ἔστι διαφορά" (Arist. *Met.* 1055 a 27); cp. however 1054 b 27-8 πᾶν γὰρ τὸ διαφέρον διαφέρει ἢ γένει ἢ εἴδει, and Ross' commentary *ad* 1055 a 26-7, cited next page, n. 1.

[2] *Contra* R-F "within"; Tricot "à l'intérieur des"; but compare L-M "dans le cas des".

ἀρχαῖς, ..., 8 a 12 ἀόριστον δὲ καθάπερ ἐν ταῖς τέχναις, 9 a 3 καθάπερ ἐν τοῖς πρακτοῖς καὶ ποιητοῖς, &c.

It is said to be necessary (**ἀνάγκη**) that universals differ from each other,[1] presumably as something inherent in classification:[2] entities belong to some particular class because they share a διαφορά.

It is implied that when we are dealing with universals, too, our knowledge necessarily depends on the observation of differences. This obtains whether these universals are genera or species (**ἐάν τε γένη τὰ καθόλου ἐάν τ' εἴδη**):[3] in this context the distinction between genus and species is irrelevant, since each is considered as 'generic' in relation to the next lower level, which consists of a plural number of entities in either case: of εἴδη in the case of γένη, of individual entities in the case of εἴδη; moreover, γένος and εἶδος are relative terms in any case.[4]

The relevance, then, of the addition **πλειόνων ὄντων τῶν ὑπὸ τὰ καθόλου**[5] seems to be that species and genera are different from individuals[6] only insofar as they cover a plurality of entities: there is no reason to consider differences between universals as more significant than than differences between individual entities.

So here again the focus is on the role of αἴσθησις as the first, and thereby essential, stage in the acquisition of knowledge. Th. might disagree with Aristotle's valuation in

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[1] It may be noted that in view of τὸ ἐπίστασθαι ... οὐκ ἄνευ διαφορᾶς τινος above, in the present context διαφέρειν does imply that between genera a διαφορά obtains, too: compare Ross' commentary *ad* Arist. *Met.* 1055 a 26-7: "It is impossible to make consistent Aristotle's various statements in these chapters about difference. In chapter 3 difference in genus was freely recognized, and in its extremest form, viz. difference of category (1054ᵇ 29, 35). So too in this chapter (1055ᵃ 6). Yet here he says that there is no such thing as difference between a thing and something else outside its genus. Two explanations might be offered. (1) Aristotle may mean that if X and Y are in different genera they should not be said to have difference, but the genera should. If this had been his meaning, however, he would probably have taken the trouble to state it clearly. (2) It may be that while he uses διαφέρειν, διάφορον in a sense almost (not quite, cf. 1054ᵇ 25) as wide as their everyday sense, he uses διαφορά in the technical sense which it bears in logic, viz. = a differentiation of a genus. This seems more likely." (II.291).

[2] Cp. *ad* ἀνάγκη 4 b 13.

[3] PJCL[1] read γένει ... εἴδει (which would construe with διαφέρειν), leaving the repetition of τὰ καθόλου unaccounted for.

[4] "Die theophrastischen Begriffe γένη und εἴδη sind wie die des Aristoteles relativ", STROEMBERG (1937) 158; "γένος und εἶδος werden nicht mehr unterschieden", KRAEMER (1968) 306 *ad HP* I.1.5.

[5] ὑπό τι "of the logical subordination of things *under* a class", LSJ C.I.3 s.v.; cp. e.g. *HP* I.8.2 τὰ ὑπὸ ταὐτὸ γένος and also, less technically, (τὰ) ὑπὸ τὴν φύσιν 9 a 13.

[6] Referred to by ἕτερα above.

Arist. *An. Post.* 87 b 37 – 88 a 8 αἰσθάνεσθαι μὲν γὰρ ἀνάγκη καθ' ἕκαστον, ἡ δ' ἐπιστήμη τὸ τὸ καθόλου γνωρίζειν ἐστίν. διὸ καὶ εἰ ἐπὶ τῆς σελήνης ὄντες ἑωρῶμεν ἀντιφράττουσαν τὴν γῆν, οὐκ ἂν ᾔδειμεν τὴν αἰτίαν τῆς ἐκλείψεως. ᾐσθανόμεθα γὰρ ἂν ὅτι νῦν ἐκλείπει, καὶ οὐ διότι ὅλως· οὐ γὰρ ἦν τοῦ καθόλου αἴσθησις. οὐ μὴν ἀλλ' ἐκ τοῦ θεωρεῖν τοῦτο πολλάκις συμβαῖνον τὸ καθόλου ἂν θηρεύσαντες ἀπόδειξιν εἴχομεν· ἐκ γὰρ τῶν καθ' ἕκαστα πλειόνων τὸ καθόλου δῆλον. τὸ δὲ καθόλου τίμιον, ὅτι δηλοῖ τὸ αἴτιον· ὥστε περὶ τῶν τοιούτων ἡ καθόλου τιμιωτέρα τῶν αἰσθήσεων καὶ τῆς νοήσεως,[1] ὅσων ἕτερον τὸ αἴτιον· περὶ δὲ τῶν πρώτων ἄλλος λόγος.

VIII.2 (8 b 20 – 9 a 9): *Practically every science is concerned with what is peculiar to the object at issue. Generally the task of a science is to distinguish what is the same in a plurality of things, whether on a higher or lower level of generalization. This 'same' differs with the objects of investigation. Complete science makes use both of what is the same universally and of what is the same at the level of particular things. In the case of the intelligible objects, the end is universal; where the things of nature are concerned, it is the individual (as is the case with things made and things done, where it is more obvious that the particular product or action is aimed at).*

There are several kinds of sameness through which we may know something; not only the wider varieties connected with classification, but also sameness of quality, place, time, and the other categories. Analogical sameness is most fertile since it produces knowledge of what is beyond immediate acquaintance.

8 b 20-4 σχεδὸν δὲ καὶ ... τὶ κατά τινος.

Here, as in 5 b 26 (εἰ δὲ καὶ τὸ ἄριστον ἀπὸ τοῦ ἀρίστου ...), **δὲ καί** introduces the sentence as a whole as an addition to the preceding argument.[2]

Now that the presence of some διαφορά has been indicated as a necessary condition for our knowing things, the author turns to the practice of the sciences: the position of **πᾶσα** lends prominence to ἐπιστήμη, the transition being now from 'knowing' (τὸ ἐπίστασθαι) to 'knowledge', 'science' (ἐπιστήμη);[3] compare

[1] Here "the quasi-perception of mathematical objects", Barnes *ad loc.*

[2] Cp. Tricot: "J'ajoute que". Less precisely R-F "Almost all knowledge, too, ..."; less aptly L-M "Et sans doute".

[3] What Gildersleeve 314 says of Plato applies to Th. h.l.: "With but very few exceptions the reason for the postposition [of πᾶς without the article in Plato] is evident at first sight, the prominence of the substantive causing πᾶς to take second place".

Plato *Euthyphr.* 13 B 7 οὐκοῦν θεραπεία γε πᾶσα ταὐτὸν διαπράττεται; οἷον τοιόνδε· (followed by examples such as ἱππική, κυνηγετική, ὁσιότης).

Practically every kind of knowledge (or every science), then, is of 'peculiars' (**τῶν ἰδίων**). τὸ ἴδιον appears to be used here in a broad sense, covering not only characteristic properties (τά τε θεωρούμενα καθ' ἑαυτὰ κ.τ.λ., 8 b 22-3)—i.e. τὸ ἴδιον proper—, but also the essence of things: see

Arist. *Top.* 101 b 17-23 πᾶσα δὲ πρότασις καὶ πᾶν πρόβλημα ἢ γένος ἢ ἴδιον ἢ συμβεβηκός δῆλοι· καὶ γὰρ τὴν διαφορὰν ὡς οὖσαν γενικὴν ὁμοῦ τῷ γένει τακτέον. ἐπεὶ δὲ τοῦ ἰδίου τὸ μὲν τὸ τί ἦν εἶναι σημαινεῖ, τὸ δ' οὐ σημαίνει, διῃρήσθω τὸ ἴδιον εἰς ἄμφω τὰ προειρημένα μέρη, καὶ καλείσθω τὸ μὲν τὸ τί ἦν εἶναι σημαῖνον ὅρος, τὸ δὲ λοιπὸν κατὰ τὴν κοινὴν περὶ αὐτῶν ἀποδοθεῖσαν ὀνομασίαν προσαγορευέσθω ἴδιον.[1]

σχεδόν qualifies the comprehensiveness of πᾶσα (see 8 a 24 with note). This modification could have been occasioned by the science of the principles itself, insofar as the material principle—if it 'is' at all—is indeterminate (i.e. neither a particular thing, nor of a certain quality, &c.: see 8 a 14-9).[2]

γάρ introduces a justification for the preceding statement: ἴδια are concerned whether one investigates the essence of things or properties (of any kind). For **... τε ... τε** coordinating two classes of entities cp. 8 b 18-9.

The **οὐσία**, i.e. the essence or essential nature which is stated in the definition, may justly be called an ἴδιον, since it belongs to the thing defined and to nothing else. The fact that οὐσία is used here in a more limited and technical sense, as distinct from the use of οὐσία with reference to the comprehensive whole, is made explicit by the addition of the Aristotelian expression of **τὸ τί ἦν εἶναι**, literally: "the what-it-is-to-be<-that-thing>",[3] a somewhat artificial expression no doubt familiar to Th.' audience.[4] TRICOT's "quiddity" well brings out its artificial character.

This type of ἴδιον may be compared with that in Arist. *Top.* 101 b 22 f. (quoted above), which is τὸ τί ἦν εἶναι σημαῖνον and may be called ὅρος.

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[1] The distinction made here by Aristotle between four different kinds of πρότασις and of πρόβλημα is said to have been simplified by Th.: see 124B FHS&G, below.

[2] L-M' suggestion (*ad loc.*) that Th. may be thinking of mathematics seems to be unlikely in view of 9 a 15-8, where—whatever his valuation of that science—Th. does recognize different provinces of mathematics with something ἴδιον to them.

[3] Cp. GUTHRIE VI.147.

[4] The rarity (1x) of this technical expression is taken by REALE 145 as a sign of Th.' limited interest in the 'ousiological' dimension.

Th. is reported to have assigned problems about γένος[1] to the group πρὸς ὅρον:

124B FHS&G (= Proclus *In Parm.* 1) τοσοῦτον μέντοι διαφέρειν τῆς τοπικῆς τῆς παρὰ τῷ Ἀριστοτέλει μεθόδου ταύτην φασίν, ὅτι ἐκείνη μὲν εἴδη προβλημάτων διεστήσατο τέτταρα καὶ πρὸς ἕκαστον τούτων εὐπορίαν ἐξεῦρεν ἐπιχειρήσεων, εἰ καὶ ὁ Θεόφραστος τὴν τετράδα συνελὼν ἐν δύο μόνοις προβλήμασι περιγράφει τὴν μέθοδον, οἷον τὸ μὲν πρὸς ὅρον εἶναι τίθεται, τὸ δὲ πρὸς τὸ συμβεβηκός, *τὰ μὲν γενικὰ προβλήματα τοῖς πρὸς ὅρον νείμας*, τὰ δὲ πρὸς ἴδιον τοῖς κατὰ συμβεβηκὸς συναριθμῶν.

τά ... θεωρούμενα καθ' ἑαυτά καὶ οὐ κατὰ συμβεβηκός refers to what may be observed[2] about an entity,[3] involving its properties as according to the categories minimally:

Arist. *An. Post.* 83 a 18-23 ὑποκείσθω δὴ τὸ κατηγορούμενον κατηγορεῖσθαι ἀεί, οὗ κατηγορεῖται, ἁπλῶς, ἀλλὰ μὴ κατὰ συμβεβηκός· οὕτω γὰρ αἱ ἀποδείξεις ἀποδεικνύουσιν. ὥστε ἢ ἐν τῷ τί ἐστιν ἢ ὅτι ποιὸν ἢ ποσὸν ἢ πρός τι ἢ ποιοῦν τι ἢ πάσχον ἢ ποὺ ἢ ποτέ, ὅταν ἓν καθ' ἑνὸς κατηγορηθῇ.

But compare also

Od. 5 οὐ μὴν ἀλλ' ὥς γ' ἁπλῶς διελεῖν αἱ μέν (sc. ὀσμαί) εἰσι καθ' αὑτὰς αἱ δὲ κατὰ συμβεβηκός· αἱ μὲν τῶν χυλῶν καὶ τῆς τροφῆς κατὰ συμβεβηκός, αἱ δ' ὥσπερ τῶν ἀνθῶν καθ' αὑτάς.

HP III.2.4 ἔτι τε τῷ φιλόψυχρα καὶ ὀρεινὰ μᾶλλον εἶναι· καὶ γὰρ τοῦτο λαμβάνεται πρὸς τὴν ἀγριότητα τῶν δένδρων καὶ ὅλως τῶν φυτῶν, εἴτ' οὖν καθ' αὑτὸ λαμβανόμενον εἴτε κατὰ συμβεβηκός. ("... qu'on les tienne pour réellement essentiels ou pour accidentels", tr. AMIGUES.)

Ign. 14 ἐκ ταύτης δὲ τῆς αἰτίας καὶ τὸ ψυχρὸν ἐνιαχοῦ δοκεῖ τὸ αὐτὸ ποιεῖν τῷ θερμῷ, καὶ ἁπλῶς καὶ ταῖς ὑπερβολαῖς. πέττειν τε γάρ φασι τοὺς καρποὺς τὰ ψύχη καὶ ἀποκαίειν καὶ τὸ καῦμα καὶ τὸ ψῦχος, οὐκ ἀληθῆ λέγοντες. ἀποκαίει γὰρ οὕτω καὶ πέττει τὸ ψῦχος οὐ προηγουμένως[4] ἀλλὰ κατὰ συμβεβηκός, ὅτι συστέλλει καὶ συνάγει τὸ θερμὸν τὸ ἐργαζόμενον ἐκεῖνο, πλέον δὲ ὂν καὶ ἰσχυρὸν μᾶλλον.—for which compare

CP II.8.1 εἰ δὲ ἥ γε πέψις τῶν καρπῶν τοῖς μὲν ὑπὸ θερμοῦ δοκεῖ, τοῖς δ' ὑπὸ ψυχροῦ γίνεσθαι, κατὰ συμβεβηκὸς ἥ γε ὑπὸ τοῦ ψυχροῦ γινομένη· τὸ γὰρ

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[1] The parallelism between knowledge and being which is generally assumed in this context (see Introduction p. 13 n. 2) makes it likely that distinctions between types of problems and propositions will throw light on distinctions between types of objects of knowledge.

[2] Literally "what is observed", with the present participle having distributive reference (see also ἦν ἄν below); contrast the perfect participle in *HP* IV.7.8 καὶ τὰ μὲν ἐν τῇ ἔξω θαλάττῃ δένδρα τά γε νῦν τεθεωρημένα σχεδὸν τοσαῦτά ἐστιν.

[3] Cp. the contrast between τὰ συμβεβηκότα καθ' αὑτό and ἡ οὐσία, Arist. *PA* 643 a 27-8.

[4] On this term see BATTEGAZZORE (1984) 74, TARÁN (1981) 433 n. 256.

θερμὸν ἐν ἀμφοῖν πέττει, καὶ μία τις ἡ αἰτία, φανερὸν δ' οὐχ ὁμοίως διὰ τὴν ἀντιπερίστασιν.

These words again show a parallelism between being and knowledge: καθ' ἑαυτὰ καὶ οὐ κατὰ συμβεβηκός is most naturally construed with θεωρούμενα as a predicate "things observed <as applying> essentially and not accidentally".[1]

τι κατά τινος is a substitute for ἴδιόν τι, now in the narrower sense of ἴδιον.[2] κατά τινος is commonly found with verbs of predication, e.g. λέγειν, κατηγορεῖν τι κατά τινος,[3] from which it is a short step to the non-verbal entertaining of propositions implied in θεωρεῖν. The preposition may, however, express a wider relation of the predicate to some object as well: compare

CP III.6.6 ὥσπερ γὰρ λέγεται πολλάκις ἡ οἰκεία (sc. χώρα) μεγίστην ἔχει ῥοπήν,[4] καὶ πρὸς ἀντίληψιν καὶ πρὸς εὐκαρπίαν· ὃ καὶ καθ' ὅλων τῶν γενῶν ἐστιν καὶ ἐν αὐτοῖς τοῖς ὁμοειδέσιν.

For the use of **ἦν ἄν** see K-G II.211 f.;[5] the choice of mood, then, accords with the use of πᾶσα as explained above. Compare

Plato *Apol.* 22 B 2-4 ἀναλαμβάνων οὖν αὐτῶν τὰ ποιήματα ἅ μοι ἐδόκει μάλιστα πεπραγματεῦσθαι αὐτοῖς, διηρώτων ἂν αὐτοὺς τί λέγοιεν, ...

For essence and essential characteristics as constituting two different objects of knowledge compare

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[1] Cp. Arist. *An. Post.* 83 a 17 where saying that the cultured (man) is white is characterized as an example of (μηδαμῶς κατηγορεῖν or) κατηγορεῖν μὲν μὴ ἁπλῶς, κατὰ συμβεβηκὸς δὲ κατηγορεῖν. Also *HP* III.1.2 σημεῖον δὲ λέγουσιν οὐ μόνον ὅτι φύεται πολλὰ τῶν ῥιζῶν ἀπηρτημένα καθ' οὓς ἂν ᾖ τόπους, ἀλλὰ καὶ τὰ συμβαίνοντα θεωροῦντες, οἷον ἐν Φενεῷ τῆς Ἀρκαδίας, ...

[2] The fact that Th. (124B FHS&G, see above) is reported to have combined τὰ δὲ πρὸς ἴδιον (sc. προβλήματα) with τὰ κατὰ συμβεβηκός (which might seem to amount to a revaluation of the latter) need not to concern us here. But cp. *HP* III.2.4 quoted above.

[3] "saepissime per κατά τινος ea res significatur de qua aliquid dicitur vel cogitatur", Bonitz 368 a 34-5; e.g. *HP* VII.3.3 ἴδιον δὲ καὶ ὃ λέγουσι κατὰ τούτου (sc. τοῦ κυμίνου)· φασὶ γὰρ δεῖν καταρᾶσθαί τε καὶ βλασφημεῖν σπείροντας, εἰ μέλλει καλὸν ἔσεσθαι καὶ πολύ.

[4] ὥσπερ ... λέγεται πολλάκις suggests that ἡ οἰκεία (or, τὸ -ον, ὁ -ος) μεγίστην ἔχει ῥοπήν was a proverbial expression; cp. 10 a 23-4. *Contra* Einarson/Link ("as we repeat"), with note "*Cf. CP* 3 1.6 with the passages there cited"; "quemadmodum enim saepe dictum est" Wimmer.

[5] LSJ s.v. ἄν C: "Iterative construction, to express elliptically *a condition fulfilled whenever an opportunity offered*".

Arist. *Met.* 995 b 19-20 (ἐπισκεπτέον) πότερον περὶ τὰς οὐσίας ἡ θεωρία μόνον ἐστὶν ἢ καὶ περὶ τὰ συμβεβηκότα καθ'αὑτὰ ταῖς οὐσίαις, and as far as τὰ συμβεβηκότα are concerned,

997 a 17-21 τὸ δὲ μίαν (sc. ἐπιστήμην) πασῶν οὐκ εὔλογον· καὶ γὰρ ἂν ἀποδεικτικὴ μία περὶ πάντων εἴη τῶν συμβεβηκότων, εἴπερ πᾶσα ἀποδεικτικὴ περί τι ὑποκείμενον θεωρεῖ τὰ καθ' αὑτὰ συμβεβηκότα ἐκ τῶν κοινῶν δοξῶν.

More specifically

Arist. *Phys.* 193 b 25-30 ἔτι εἰ (sc. θεωρητέον) ἡ ἀστρολογία ἑτέρα ἢ μέρος τῆς φυσικῆς· εἰ γὰρ τοῦ φυσικοῦ τὸ τί ἐστιν ἥλιος ἢ σελήνη εἰδέναι, τῶν δὲ συμβεβηκότων καθ' αὑτὰ μηδέν, ἄτοπον, ἄλλως τε καὶ ὅτι φαίνονται λέγοντες οἱ περὶ φύσεως καὶ περὶ σχήματος σελήνης καὶ ἡλίου, καὶ δὴ καὶ πότερον σφαιροειδὴς ἡ γῆ καὶ ὁ κόσμος ἢ οὔ.

In the present sentence, then, Th. seems to argue that a science which concentrates upon the οὐσία of things is not essentially different from one that concentrates on its properties, seeing that both aim at knowledge of some particular thing.

8 b 24-7 ὅλως δὲ ... ἡ ἐξ ἀμφοῖν.

In general it is the task of a science to distinguish what is the same *in a plurality of things* (**ἐν πλείοσιν**).[1] For **ὅλως δέ**, see *ad* 8 a 19. The present observation concerns all sciences generally; a distinction will be made in 8 b 27 ff. ἔστιν δ' ἔνια, ... τῶν δὲ ...[2] Generally speaking the task of a science is to discern 'the same' in a plurality of things (**τὸ αὐτὸ συνιδεῖν**); i.e. the investigator should try to recognize similarities between the different objects which constitute his particular field of study.[3] συνορᾶν[4] in

[1] Cp. πλειόνων ὄντων 8 b 18 with note.

[2] Cp. *CP* I.13.11: (It is not unreasonable that small plants, like trees, may have a second blooming, too.) ὅλως δέ, ὃ πλεονάκις εἴρηται, μαλακοῦ καὶ ὑγροῦ τοῦ ἀέρος, καὶ τὸ σύνολον εὐκρᾶτος, αἰεὶ δύνατον βλαστάνειν οὐ πάντα, ἀλλ' ἔνια τῶν δένδρων, τὰ δ' ἐλάττω, τούτων ἔτι μᾶλλον. ὃ καὶ νῦν ἐπί τινων στεφανωμάτων συμβαίνει, τόπους ἐχόντων εὐσκεπεῖς καὶ προσείλους.

[3] Aristotle even reckons with an understanding of 'the same' which amounts to recognizing the identity of an individual entity: see *Met.* 1018 a 7-9 ὥστε φανερὸν ὅτι ἡ ταυτότης ἑνότης τίς ἐστιν ἢ πλειόνων τοῦ εἶναι ἢ ὅταν χρῆται ὡς πλείοσιν, οἷον ὅταν λέγῃ αὐτὸ αὐτῷ ταὐτόν· ὡς δυσὶ γὰρ χρῆται αὐτῷ.

[4] Cp. also *HP* I.14.4 τῶν δὲ ἡμέρων καὶ ὠνομασμένα τὰ πλείω καὶ ἡ αἴσθησις κοινοτέρα· λέγω δ' οἷον ἀμπέλου συκῆς ῥόας μηλέας ἀπίου δάφνης μυρρίνης τῶν ἄλλων· ἡ γὰρ χρῆσις οὖσα κοινὴ συνθεωρεῖν ποιεῖ τὰς διαφοράς. "Leur exploitation dans la vie courante permet d'avoir une vue d'ensemble de leurs différences", tr. AMIGUES.

the sense of to discern something shared by, or common to, a plurality of things:[1]

Plato *Phaedr.* 265 D 3 εἰς μίαν τε ἰδέαν συνορῶντα ἄγειν τὰ πολλαχῇ διεσπαμένα, ἵνα ἕκαστον ὁριζόμενος δῆλον ποιῇ περὶ οὗ ἂν ἀεὶ διδάσκειν ἐθέλῃ.
Arist. *Met.* 1048 a 37 δῆλον δ' ἐπὶ τῶν καθ' ἕκαστα τῇ ἐπαγωγῇ ὃ βουλόμεθα λέγειν, καὶ οὐ δεῖ παντὸς ὅρον ζητεῖν ἀλλὰ καὶ τὸ ἀνάλογον συνορᾶν, ὅτι ὡς τὸ οἰκοδομοῦν πρὸς τὸ οἰκοδομικόν, καὶ τὸ ἐγρηγορὸς πρὸς τὸ καθεῦδον, καὶ τὸ ὁρῶν πρὸς τὸ μῦον μὲν ὄψιν δὲ ἔχον, καὶ τὸ ἀποκεκριμένον ἐκ τῆς ὕλης πρὸς τὴν ὕλην, καὶ τὸ ἀπειργασμένον πρὸς τὸ ἀνέργαστον.
Top. 108 b 19-28 πρὸς δὲ τὴν τῶν ὁρισμῶν ἀπόδοσιν, διότι δυνάμενοι *συνορᾶν τί ἐν ἑκάστῳ ταὐτόν*, οὐκ ἀπορήσομεν εἰς τί δεῖ γένος ὁριζομένους τὸ προκείμενον τιθέναι· τῶν γὰρ κοινῶν τὸ μάλιστα ἐν τῷ τί ἐστι κατηγορούμενον γένος ἂν εἴη. ὁμοίως δὲ καὶ ἐν τοῖς πολὺ διεστῶσι χρήσιμος πρὸς τοὺς ὁρισμοὺς ἡ τοῦ ὁμοίου θεωρία, οἷον ὅτι ταὐτὸν γαλήνη μὲν ἐν θαλάσσῃ, νηνεμία δ' ἐν ἀέρι (ἑκάτερον γὰρ ἡσυχία), καὶ ὅτι στιγμὴ ἐν γραμμῇ καὶ μονὰς ἐν ἀριθμῷ· ἑκάτερον γὰρ ἀρχή. ὥστε τὸ κοινὸν ἐπὶ πάντων γένος ἀποδιδόντες δόξομεν οὐκ ἀλλοτρίως ὁρίζεσθαι. See also
108 a 13 μάλιστα δ' ἐν τοῖς πολὺ διεστῶσι γυμνάζεσθαι δεῖ· ῥᾷον γὰρ ἐπὶ τῶν λοιπῶν δυνησόμεθα τὰ ὅμοια συνορᾶν, quoted *ad* ὡς ἂν ἀπέχοντες πλεῖστον, 9 a 7-8, p. 426 below.
CP VI.15.1 ἀλλὰ γὰρ ποῖαι μέν τινες ὀσμαὶ χρόνιαι, καὶ ποῖαι ξηραινομένων εὐοσμότεραι, καὶ τἆλλα τὰ τούτοις ὅμοια, διὰ τῶν εἰρημένων θεωρείσθω· καὶ γὰρ ὅσα μὴ εἴρηται ῥᾴδιον ἐκ τούτων συνιδεῖν.
II.18.4 οὐ χαλεπὸν δ' ἴσως οὐδὲ ἐν ἄλλοις γε πλείοσι λαβεῖν τὰς βλάβας (πολλῷ γὰρ πλείους εἰσὶ τῶν ὠφελίμων, ὥσπερ καὶ τοῖς ζῴοις)· ... ἀλλὰ τὸ μὲν τοιοῦτον γένος ῥᾴδιον ἐν πόλλοις (ὥσπερ ἐλέχθη) συνιδεῖν.
584A.38 FHS&G ὅθεν ἔτι καὶ νῦν πρὸς τῷ τέλει τῶν θυηλῶν τοῖς ψαισθεῖσι θυλήμασι χρώμεθα, μαρτυροῦντες μὲν τῷ πραττομένῳ τὴν ἐξ ἀρχῆς τῶν θυμάτων αὔξησιν, οὐ συνορῶντες δὲ τίνων χάριν τούτων ἕκαστα δρῶμεν.

In the present passage the aorist infinitive may be explained by its having focus function;[2] every science *is of* peculiarities; what a science *should do* is ...

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[1] Elsewhere 'to view a plurality of objects at the same time'; e.g. Arist. *SE* 174 a 18 χαλεπὸν ... ἅμα πολλὰ συνορᾶν. Also *Sens.* 36 σχεδὸν γὰρ οἱ πολλοὶ τὸ ὁρᾶν οὕτως ὑπολαμβάνουσι διὰ τὴν γινομένην ἐν τοῖς ὀφθαλμοῖς ἔμφασιν. τοῦτο δὲ οὐκέτι συνεῖδον ὡς οὔτε τὰ μεγέθη σύμμετρα τὰ ὁρώμενα τοῖς ἐμφαινομένοις οὔτε ἐμφαίνεσθαι πολλὰ ἅμα καὶ τἀναντία δυνατόν, κ.τ.λ.; *CP* I.4.6 καὶ γὰρ εἴ τι παραλέλειπται, προσθεῖναι καὶ συνιδεῖν οὐ χαλεπόν.

In Arist. *Top.* 108 a 3 τὰ ὅμοια συνορᾶν both interpretations seem to converge.

[2] In τὸ ἀνάλογον συνορᾶν (Arist. *Met.* 1048 a 37, above) the present tense seems to be accounted for by the fact that the opposition is primarily between ὅρον and τὸ ἀνάλογον.

That what is concerned is the way in which science proceeds, rather than its object,[1] is brought out by ταὐτῷ (... ἐπιστάμεθα) in 9 a 4-5.[2] There is no reason, then, to assume that the sentence stands in an opposition[3] to what has gone before.[4]

"The same" which is to be distinguished "in a plurality of things" may refer to either of two different situations (**ἤτοι ... λεγόμενον ἢ** ...): "τὸ αὐτό" may be used of what is shared by (**κοινῇ**) all different objects studied universally (**καθόλου**), or of what is shared by different objects studied but is particular (**ἰδίᾳ**) to that class of objects. **πως** indicates that it is left unspecified in what way that is shared applies in each case.[5] see *ad* 6 b 7. For πως allowing a similarly what may be called 'distributive' interpretation compare

Ign. 36 ἔχει ... τὰ τοιαῦτα μεγάλας ἕκαστά πως τὰ ὑποκείμενα διαφορὰς (...).
HP I.5.5 ὡσαύτως δὲ καὶ τὰ ἄλλα πάντα πρὸς τὴν φύσιν πως ἀνάγεται ("In like manner the other peculiarities too can in some way be referred to the essential character", tr. HORT.)

The following passages may illustrate what Th. has in mind:

HP II.7.1 περὶ δὲ τῆς ἐργασίας καὶ τῆς θεραπείας (sc. of trees) τὰ μέν ἐστι κοινὰ τὰ δὲ ἴδια καθ' ἕκαστον. κοινὰ μὲν ἥ τε σκαπάνη (spade-work) καὶ ἡ ὑδρεία καὶ ἡ κόπρωσις, ἔτι δὲ ἡ διακάθαρσις καὶ ἀφαίρεσις τῶν αὔων. διαφέρουσι δὲ τῷ μᾶλλον καὶ ἧττον.[6]
Arist. *Meteor.* 341 b 1 λεγώμεν διὰ τίν' αἰτίαν αἵ τε φλόγες αἱ καιόμεναι φαίνονται περὶ τὸν οὐρανὸν καὶ οἱ διαθέοντες ἀστέρες καὶ οἱ καλούμενοι ὑπό τινων δαλοὶ καὶ αἶγες· ταῦτα γὰρ πάντ' ἐστὶν τὸ αὐτὸ καὶ διὰ τὴν αὐτὴν αἰτίαν, διαφέρει δὲ τῷ μᾶλλον καὶ ἧττον.[7]

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[1] *Contra* TRICOT *ad loc.*: "Il n' y a de science que du général. La science laisse de côté les individus pour étudier l'espèce."

[2] Though this reading is not beyond dispute: see p. 420 *ad loc.*

[3] As R-F have it, who conjecture ὅμως, as being "more suitable" than ὅλως.

[4] USENER's ὁμοίως (1890), while recognizing the compatibility of the two statements, disregards the difference in scope. Cp. USENER's previous interpretation of the passage 8 b 10 ἡ γὰρ αἴσθησις ... 9 a 9 διὰ τἄμφω—which he conceives as a fragment ("Bruchstück") which might answer the question πόσοι ... τρόποι καὶ ποσαχῶς τὸ εἰδέναι 9 a 23-4—: "Es werden zwei τρόποι behandelt, die Erkenntnis der Verschiedenheit und der Identität" (1861) 274.

I have argued above that Th. is not yet speaking about different methods applying to different fields of knowledge; the points he is making are (1) that a science is always of some particular thing, and (2) that it proceeds by recognizing various kinds of 'identity'.

[5] See *ad* 6 b 7. *Contra* L-M: πως would be used "pour souligner qu'il ne s'agit pas d'individus proprement dits (mais d'espèces)."

[6] Also II.7.2 ἁπλῶς δὲ καὶ ταύτην καὶ τὴν ἄλλην θεραπείαν πρὸς τὴν ἰδίαν φύσιν ἑκάστῳ ποιητέον.

[7] The feature that 'the same' which applies to all relevant cases universally involves a common cause is also illustrated by *CP* II.13.3 κοινοῦ δὲ τοῦ πάθους ὄντος ὁμοίως ζῴων τε

These passages throw doubt on R-F's supposition that "κοινῇ καὶ καθόλου λεγόμενον seems to refer to specific and ἰδίᾳ πως καθ' ἕκαστον to generic identity";[1] the statement seems to have a more general reference to all sorts of objects that may be studied, including individual phenomena as well as species and genera.

It is generally assumed that the examples (**ἀριθμοῖς γραμμαῖς, ζῴοις φυτοῖς**)[2] are meant to illustrate the second member of the disjunction only (ἰδίᾳ πως καθ' ἕκαστον), yet it seems more likely that they illustrate the first one as well. It is possible to find common characteristics, for the pairs of related genera mentioned, which exemplify 'the same' both

(i) universally, e.g. of numbers and lines 'without movement',[3] of animals and plants 'endowed with life'[4] and 'absorbing food',[5] and

(ii) within the limits imposed by a specific difference, e.g. of numbers and lines 'quantity', but with 'discrete' (διωρισμένον) quantity in the case of numbers, 'continuous' (συνεχές) quantity for lines;[6] of animals and plants 'being endowed with soul', but with nutritive soul alone in the case of plants.[7]

The examples of animals and plants in particular show that the disjunction, rather than to reflect a clear-cut distinction between things which are 'the same' with or without qualification, or 'universally' and 'in a sense', is relative to the viewpoint of the scientist—or to a given stage of the inquiry.[8]

Accordingly, if we are looking for the special characteristic of some entity we will try to find 'the same' which is shared by each set of individuals including the entity in question, from the most comprehensive downwards, until we find the characteristic peculiar to the entity in question: see e.g.

> Arist. *EN* 1097 b 33 – 1098 a 4 τὸ μὲν γὰρ ζῆν κοινὸν εἶναι φαίνεται καὶ τοῖς φυτοῖς, ζητεῖται δὲ τὸ ἴδιον (sc. of man). ἀφοριστέον ἄρα τήν τε θρεπτικὴν καὶ τὴν αὐξητικὴν ζωήν. ἑπομένη δὲ αἰσθητική τις ἂν εἴη, φαίνεται δὲ καὶ αὐτὴ κοινὴ καὶ ἵππῳ καὶ βοὶ καὶ παντὶ ζῴῳ. λείπεται δὴ πρακτική τις τοῦ λόγον ἔχοντος· ...

καὶ φυτῶν (sc. that they change with a change of region), κοινήν τινα δεῖ καὶ τὴν αἰτίαν ζητεῖν. Cp. also *CP* III.2.3 below.

[1] *Ad loc.*; also Reale 67 n.130, L-M *ad loc.*

[2] The dative apparently continues ἐν πλείοσιν.

[3] E.g. Arist. *Phys.* 194 a 4-5 ἡ ζωὴ ἐν τοῖς ζῴοις καὶ ἐν τοῖς φυτοῖς εὑρέθη.

[4] Ps.-Arist. *Plant.* 815 a 10.

[5] τὸ ἑλκεῖν τροφήν ἐστιν ἐξ ἀρχῆς φυσικῆς, καὶ τοῦτ' αὐτό ἐστι τὸ κοινὸν ζῴου καὶ φυτοῦ, *ibid.* 816 b 14.

[6] Thus R-F; see Arist. *Cat.* 4 b 20-5 and cp. *Met.* 1020 a 7 ff.

[7] Arist. *DA* 413 b 7-8, cp. 434 a 22 ff.

[8] There is an obvious connection with the relative character of the notions γένος and εἶδος, cp. *ad* 8 b 19-20.

Conversely, the scientist in his search for causes will proceed from qualified sameness to unqualified, universal sameness.

That science which takes account of both sorts of sameness, general as well as specific (**ἡ ἐξ ἀμφοῖν** sc. ἐπιστήμη), is complete (τέλεος); cp. the position of Chapter III above;[1] also, from the point of view of differences, which is just the reverse of the proceeding by 'sameness' h.l.:

CP III.2.3 ὁμοίως δὲ καὶ τὰ τῶν ἀμπέλων· διαιρετέον τάς τε πρωτοτόμους καὶ τὰς ὀψιτόμους, καὶ τὰς βραχυτόμους καὶ τὰς μακροτόμους, καὶ τοῖς ἄλλοις ὡσαύτως, ἀναφέροντας ἀεὶ πρὸς τὸ τέλος. ὁ μὲν οὖν σκοπὸς οὗτος, καὶ ἡ καθ' ἕκαστα διαίρεσις. ὑπὲρ ἑκάστου δέ ἐστιν ὁ λόγος ὁ τὴν αἰτίαν ἔχων, ἣν δεῖ μὴ λανθάνειν. ὁ γὰρ ἄνευ ταύτης ποιῶν καὶ τῷ ἔθει καὶ τοῖς συμβαίνουσιν κατακολουθῶν κατορθοῖ μὲν ἴσως, οὐκ οἶδεν δέ (καθάπερ ἐν ἰατρικῇ)· *τὸ δὲ τέλειον ἐξ ἀμφοῖν*. ὅσοι δὲ καὶ τὸ θεωρεῖν μᾶλλον ἀγαπῶσιν,[2] αὐτὸ τοῦτο ἴδιον τοῦ λόγου καὶ τῆς αἰτίας.

The following passages testify to Th.' conviction that in botany too, both observation of individual characteristics and investigation on a more general level are required.[3] The most economical way, it is said, would be to investigate into more general matters first, since understanding of τὰ καθόλου will throw light on the particular entities as well. However, since τὰ καθ' ἕκαστα are more accessible to us, we are wrongly inclined to focus on these:

CP II.3.5 μεγίστη δ' οὖν διαφορὰ κατὰ τὰ ἔνυγρα καὶ χερσαῖα ζῷα καὶ φυτά, περὶ ὧν οὐδὲ ζητοῦμεν λόγον (ὡς εἰπεῖν), πλὴν ὑπὲρ τοῦ πότερα θερμότερα καὶ ψυχρότερα (τοῦτο γὰρ ἀμφισβητεῖται). τὰ δ' ἄλλα, ⟨καὶ⟩ οὐ συγκεχωρημένα, τῇ φύσει τίθεται. *καίτοι τὰ καθόλου καὶ κοινὰ πρῶτον ἔδει ζητεῖν·* εὑρεθέντων γὰρ τούτων, καὶ τὰ κατὰ μέρος φανερά.

τοῦτο μὲν οὖν ἴσως κωλύοιτ' ἂν διὰ τὸ χαλεπόν, εἴτε πλείους αἰτίαι τυγχάνουσιν εἴτε μία· *περὶ δὲ τῶν ἐν τοῖς καθ' ἕκαστα μᾶλλον εὐποροῦμεν*, ἡ γὰρ αἴσθησις δίδωσιν ἀρχὰς ἐπ' ἄμφω (sc. animals and plants), καὶ ἔτι μᾶλλον καὶ πλείους ἐπὶ τῶν φυτῶν (ἐμφανέστατα γὰρ τὰ συμβαίνοντα περὶ αὐτά).

On the other hand more detailed observation of the particulars is still required once rough divisions have been made:

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[1] Especially 6 a 15-22 with note.

[2] "Philosophers.", EINARSON/LINK *ad loc.*

[3] Cp. STROEMBERG (1937) 24: "Für Aristoteles—und auch für Theophrast—ist sicher die Spekulation (λόγος) der Grundtrieb des Erkennens. Die Empirie is jedoch für die Spekulation notwendig." A revealing context is Arist. *Phys.* 247 b 20-1 alternative version ed. Ross [p. 334] ἐκ γὰρ τῆς κατὰ μέρος ἐμπειρίας τὴν καθόλου λαμβάνομεν ἐπιστήμην, and the potential reading of 247 b 6-7 ἐπίσταταί πως τῇ (ΣPS) καθόλου τὸ (cjy) ἐν μέρει (τὰ καθόλου τῷ ἐν μέρει, HIAT followed by Ross).

CP II.4.7-8 οὗτος μὲν οὖν καθόλου τις διορισμός· διαφοραὶ δὲ πολλαὶ καὶ τῆς γῆς καὶ τῶν δένδρων, ὥσπερ καὶ .... τὸ δ' ἁπλοῦν ῥᾴδιον εἰπεῖν, ὥσπερ καὶ κελεύουσιν· τὰ μὲν στερεὰ καὶ πυκνὰ φυτεύειν (ἐν τοῖς ξηροῖς καὶ πυκνοῖς), τὰ δ' ἀραιὰ καὶ ὑγρὰ ἐν τοῖς μαλακωτέροις καὶ ἐφυγροτέροις. ἑκατέροις γὰρ οὕτως αἱ τροφαὶ δῆλον ὅτι σύμμετροι, τοῖς μὲν πολλῆς δεομένοις, τοῖς δ' ὀλίγης.

(8) καὶ τὸ καθόλου λεχθέν, ὑπὲρ πάντων ἴσως τῶν δένδρων ἀληθές, ὅτι καθ' ἑκατέρας τὰς χώρας ἑκάτερα δεῖ καὶ τῶν δένδρων φυτεύειν· ἀλλ' ἐν τοῖς καθ' ἕκαστα τὸ ἀκριβὲς μᾶλλον ἴσως αἰσθητικῆς δεῖται συνέσεως, λόγῳ δὲ οὐκ εὐμαρὲς ἀφορίσαι. ἐπεὶ καὶ ταῖς πρὸς τὸν ἥλιον διαφοραῖς, οἷον ἀνιόντα ἢ δυόμενον ἢ μεσοῦντα ἤ πως ἄλλως ἔχοντα, δεῖ μὴ ἀγνοεῖν ποῖα τῶν φυτῶν τὰ οἰκεῖα καὶ ὅλως καὶ τῶν ὁμογενῶν, ὅπερ οἱ γ' ἀμπελουργοὶ πειρῶνται διαιρεῖν, ὅταν συνάγκειάν (two sides of a valley) τινα λαβόντες φυτεύσωσιν, οὐ γὰρ ταὐτὰ τιθέασιν εἰς ἑκάτερον τὸ μέρος, ἀλλὰ διαιροῦσι, καὶ ποιεῖ μεγάλην διαφορὰν οὕτω τε φυτευθέντα καὶ ἀνάπαλιν. ὁμοίως δὲ τοῦτ' ἔχει καὶ ἐπὶ τῶν λοιπῶν. ἀλλ' (ὥσπερ ἐλέχθη πρότερον) αἰσθητικῆς δεῖται συνέσεως.

See also *ad* 6 b 17-20 and 8 b 20-4.

8 b 27 – 9 a 4 ἔστιν δ' ἔνια ... ἐνέργεια.

ἔνια, ὧν van Raalte; ἔνια τῶν J; ἔνια ὧν μὲν L-M; ἔνια τῶν μὲν PJ¹CLA; ἐνίων μὲν τὸ Wimmer; ἐνίων μὲν R-F; ἔνθα τῶν μὲν Usener (1890).

δέ adds a statement about differences that obtain with regard to the different *objects* of knowledge—such in contrast to what may be expected from the scientists themselves, who, although their specialism (e.g. botany) involves an orientation towards some specific kind of objects (e.g. plants), perform their task properly and fully only if they also take into account the causes which are operative.[1]

The reading of the manuscripts ἔστιν δ' ἔνια, τῶν (μέν) ..., τῶν δέ ... fails to express the point, which is clearly a division of the entire class of objects of science into two types (ἔνια, ὧν ... vs. τῶν δέ ...), rather than of a subset (ἔνια) of objects. The conjecture ἐνίων (μέν), on the other hand, leaves the manuscript tradition ἔνια unaccounted for. It seems preferable to read, with a minimal change, **ἔνια, ὧν** ...[2] For the use in τῶν δὲ τὸ ἐν μέρει of **δέ** without a μέν preceding cp. καὶ ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς 4 a 15-6, with note.

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[1] Cp. *CP* III.2.3 quoted *ad* ἢ ἐξ ἀμφοῖν, above.

[2] Cp. L-M ἔνια, ὧν μέν. For the hiatus cp. the examples listed by Hindenlang (1910) 28-9 of "Hiate vor Relativsätzen".

ἔνια, then, refers to kinds of objects, presumably the νοητά which are traditionally the object of theoretical science,[1] rather than to kinds of science, e.g. philosophy, theology (as ἔνιοι would have done). The objects of thought themselves can be said to have their end or completion in the universal; this in contrast to the science of them, since according to Th. the philosopher may be expected, after having found the ultimate cause, to go on to account even for the most humble entities (see Chapter III above). Of some things, then, the objects of thought such as analytical concepts and explanations, the end is universal (**καθόλου τέλος**),[2] since this is where the cause is to be found: **ἐν τούτῳ γὰρ τὸ αἴτιον**.[3]

τῶν δέ refers to the objects of physics, the things of nature which find their complete realization in the individual (**τὸ ἐν μέρει**),[4] just as it is among "things done and things made" (**καθάπερ ἐν τοῖς πρακτοῖς καὶ ποιητοῖς**). For καθάπερ introducing a comparison rather than an example, cp. e.g. 8 a 12 ἀόριστον καθάπερ ἐν ταῖς τέχναις.[5] The relevance of the comparison seems to be that in the case of actions and artefacts it is obvious that it is the individual act or product that is being aimed at. Compare

Ps.-Arist. *MM* 1197 a 3-10 ἔστιν δὴ τῶν ποιουμένων καὶ πραττομένων οὐ ταὐτὸ τὸ ποιητικὸν καὶ πρακτικόν. τῶν μὲν γὰρ ποιητικῶν ἐστί τι παρὰ τὴν ποίησιν ἄλλο τέλος, οἷον παρὰ τὴν οἰκοδομικήν, ἐπειδή ἐστι ποιητικὴ οἰκίας, *οἰκία αὐτῆς τὸ τέλος* παρὰ τὴν ποίησιν, ὁμοίως ἐπὶ τεκτονικῆς καὶ τῶν ἄλλων τῶν ποιητικῶν. ἐπὶ δὲ τῶν πρακτικῶν οὐκ ἔστιν ἄλλο οὐθὲν τέλος παρ' αὐτὴν τὴν πρᾶξιν, οἷον παρὰ τὸ κιθαρίζειν οὐκ ἔστιν ἄλλο τέλος οὐθέν, ἀλλ' *αὐτὸ τοῦτο τέλος, ἡ ἐνέργεια καὶ ἡ πρᾶξις*. (cp. also *EN* 1094 a 4 ff.; 1139 b 1 ff.).

Arist. *EN* 1107 a 28-32 δεῖ δὲ τοῦτο μὴ μόνον καθόλου λέγεσθαι, ἀλλὰ καὶ τοῖς καθ' ἕκαστα ἐφαρμόττειν· ἐν γὰρ τοῖς περὶ τὰς πράξεις λόγοις οἱ μὲν καθόλου κοινότεροί εἰσιν, οἱ δ' ἐπὶ μέρους ἀληθινώτεροι· περὶ γὰρ τὰ καθ' ἕκαστα αἱ πράξεις, δέον δ' ἐπὶ τούτον συμφωνεῖν.

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[1] Cp. ἔνθα ... τῶν ἀρχῶν (ἡ ζήτησις), 6 b 21.

[2] The article with τὸ ἐν μέρει in 9 a 2 seems to be accounted for by the possibility of misinterpretation of ἐν μέρει as 'in succession'; the absence of the article with καθόλου does not require explanation. (I owe this observation to Dr. J.M. van Ophuijsen.)

[3] For ἐν "consists in" cp. 4 a 17-8. *τὸ αἴτιον* refers either to the next higher level in the hierarchy in each case, or—perhaps more likely—to the first cause.

[4] See Eucken (1868) 24-5: "Sehr oft gebraucht Aristoteles ἐν μέρει gleichbedeutend mit κατὰ μέρος und ἐπὶ μέρους entgegengesetzt dem Allgemeinen, dem Ganzen, dem Ununterbrochenen u.s.w. Besonders oft steht ἐν μέρει dem καθόλου gegenüber. (...) τὰ ἐν μέρει sind die particularen Dinge, s. Met. 1061 b 25: ἡ δὲ φιλοσοφία περὶ τῶν ἐν μέρει μέν, ᾗ τούτων ἑκάστῳ τί συμβέβηκεν, οὐ σκοπεῖ." Cp. *ad* 8 b 25-7.

[5] Also *HP* I.1.11 καθάπερ τοῖς ζῴοις στόμα καὶ κοιλία quoted *ad* 9 a 6 (p. 422).

For **καθ' ὅσα διαίρεσις εἰς τὰ ἄτομα** compare

Arist. *Sens.* 440 b 4-7 ἐκείνως μὲν γὰρ μίγνυται ταῦτα μόνον ὅσα ἐνδέχεται διελεῖν εἰς τὰ ἐλάχιστα, καθάπερ ἀνθρώπους ἵππους ἢ τὰ σπέρματα· τῶν μὲν γὰρ ἀνθρώπων ἄνθρωπος ἐλάχιστος, τῶν δ' ἵππων ἵππος· ...

For the use of τὰ ἄτομα with reference to the individuals,[1] which cannot be further divided without loss of their οὐσία, compare

Arist. *Top.* 121 a 35-9 ὥστ' οὐκ ἂν εἴη εἶδος ἡ ἡδονὴ κινήσεως, οὐδὲ τῶν ἀτόμων οὐδὲν τῶν ὑπὸ τὸ γένος[2] τὸ τῆς κινήσεως ὄντων. καὶ γὰρ τὰ ἄτομα μετέχει τοῦ γένους καὶ τοῦ εἴδους, οἷον ὁ τὶς ἄνθρωπος καὶ ἀνθρώπου μετέχει καὶ ζῴου.

109 b 15-23 δεῖ δὲ σκοπεῖν καὶ ἄρχεσθαι ἀπὸ τῶν πρώτων, εἶτ' ἐφεξῆς ἕως τῶν ἀτόμων, οἷον εἰ τῶν ἀντικειμένων τὴν αὐτὴν ἐπιστήμην ἔφησεν εἶναι, σκεπτέον εἰ τῶν πρός τι καὶ τῶν ἐναντίων καὶ τῶν κατὰ στέρησιν καὶ ἕξιν καὶ τῶν κατ' ἀντίφασιν λεγομένων ἡ αὐτὴ ἐπιστήμη· κἂν ἐπὶ τούτων μήπω φανερὸν ᾖ, πάλιν ταῦτα διαρετέον μέχρι τῶν ἀτόμων, οἷον εἰ τῶν δικαίων καὶ ἀδίκων, ἢ τοῦ διπλασίου καὶ ἡμίσεος, ἢ τυφλότητος καὶ ὄψεως, ἢ τοῦ εἶναι καὶ μὴ εἶναι.

For **ἐνέργεια**, which signifies the complete realization or 'actuality' of a thing and, as far as τὰ τῆς φύσεως are concerned anyway, involves an essential 'activity',[3] see 8 a 11—where, the aspect of activity being secondary, the translation 'actuality' recommended itself. H.l. the notion of 'activity' is implied in the analogy with τὰ πρακτά, where the τέλος is in the activity.[4]

αὐτῶν, in our interpretation, refers to τὰ τῆς φύσεως; **οὕτως** means 'in the manner of an individual' (τὸ ἐν μέρει).

For the distinction made here, compare

Arist. *Met.* α 993 b 19-24 ὀρθῶς δ' ἔχει καὶ τὸ καλεῖσθαι τὴν φιλοσοφίαν ἐπιστήμην τῆς ἀληθείας. θεωρητικῆς μὲν γὰρ τέλος ἀλήθεια, πρακτικῆς δ'

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[1] Alternatively τὰ ἄτομα might be conceived as 'elements' or 'particles', which yields "namely wherever division <leads> to the particles". However, apart from the fact that Th. presumably does not subscribe to the denomination of the ἀρχαί of physical objects as ἄτομα, the 'splitting up' (even metaphorically) in elementary principles does not seem to bear any relation to the present issue. In view of ἐνέργεια in 9 a 4, too, reference to the basic principles might rather have been expressed by δυνάμεις. For διαίρεσις in the more concrete sense of 'splitting up', cp. *Ign.* 46 τὸ διαιρεῖν ταχύ τε καὶ εἰς λεπτά (also 47); *HP* III.18.13 (of a fruit) ἔνδοθεν δὲ στερεὸν πλὴν διῃρημένον κατὰ τὴν τετραστοιχίαν. *Od.* 13 διαιρούμενα καὶ κοπτόμενα πάντ' εὐωδέστερα (cp. also 12: τριψέως προσδεῖται καὶ διαιρέσεως "to be bruised and broken up" HORT).

[2] γένος Maguinness; εἶδος MSS.

[3] Cp. 5 a 7 with note *ad loc.*; also 10 a 11.

[4] See *MM* 1197 a 3 ff. quoted above, and 10 a 10 ff.

ἔργον· καὶ γὰρ ἂν τὸ πῶς ἔχει σκοπῶσιν, οὐ τὸ αἴτιον καθ' αὑτό, ἀλλὰ πρός τι καὶ νῦν θεωροῦσιν οἱ πρακτικοί. οὐκ ἴσμεν δὲ τὸ ἀληθὲς ἄνευ τῆς αἰτίας· ...[1]

9 a 4-6 ταὐτῷ ... διαιρέσεις·

ταὐτῷ P; ταὐτό cet.
διαιρέσεις A; διαιρέσει PJL Isḥāq; διαίρεσις CVSO.

The reading of ταὐτό, which makes 'the same' the *object* of ἐπιστήμη, seems to conflict with ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν ἐπιστήμης in 8 b 24-5, or at least to involve a modification of its purport. With **ταὐτῷ** of P the sentence specifies τὸ αὐτό in 8 b 24 by making explicit the different varieties of 'the same' which may be recognized in scientific investigation. This reading seems preferable.
For the use of the dative cp. Hom. *Il.* 5.182 ἀσπίδι γιγνώσκων αὐλώπιδί τε τρυφαλείῃ[2] rather than Thuc. IV.126.3 ἄλλων ἀκοῇ ἐπίσταμαι.[3]

The accumulation of datives with different functions does not lead to ambiguity because the series οὐσίᾳ ... ἀναλογίᾳ is familiar (see below). For a similar phenomenon in the present treatise cp. 7 a 12-3 ἐν τάξει καὶ λόγῳ, καὶ μορφαῖς καὶ δυνάμεσιν καὶ περιόδοις.[4]

The following series serves to make clear that there are several different varieties of 'the same' through which we may acquire knowledge of things, as καὶ εἰ ἄρα παρὰ ταῦτα διαιρέσεις confirms. For the same 'in essence' (οὐσίᾳ) compare e.g.

Arist. *Meteor.* 370 a 25 ff. ἡμεῖς δέ φαμεν τὴν αὐτὴν εἶναι φύσιν ἐπὶ μὲν τῆς γῆς ἄνεμον, ἐν τῇ γῇ σεισμόν, ἐν δὲ τοῖς νέφεσι βροντήν· πάντα γὰρ εἶναι ταῦτα τὴν οὐσίαν ταὐτόν, ἀναθυμίασιν ξηράν, ἣ ῥέουσα μέν πως ἄνεμός ἐστιν, ὡδὶ δὲ ποιεῖ τοὺς σεισμούς, ἐν δὲ τοῖς νέφεσι μεταβάλλουσα ἐκκρινομένη, κ.τ.λ. (cp. also 372 b 17-8 τὸ δ' αἴτιον τούτων ἁπάντων (sc. ἶρις, ἅλως, παρήλιοι &c.) ταὐτό· πάντα γὰρ ἀνάκλασις ταῦτ' ἐστίν).

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[1] Aristotle makes a similar distinction for mathematical sciences: *An. Post.* 79 a 2-6 ἐνταῦθα γὰρ (sc. in different sciences) *τὸ μὲν ὅτι* τῶν αἰσθητικῶν εἰδέναι, *τὸ δὲ διότι* τῶν μαθηματικῶν· οὗτοι γὰρ ἔχουσι τῶν αἰτίων τὰς ἀποδείξεις, καὶ πολλάκις οὐκ ἴσασι τὸ ὅτι, καθάπερ οἱ τὸ καθόλου θεωροῦντες πολλάκις ἔνια τῶν καθ' ἕκαστον οὐκ ἴσασι δι' ἀνεπισκεψίαν.

[2] "Der Instrumental des Werkzeugs und des Mittels" Schw. II.1.2, 165.

[3] "Der Instrumental des Grundes und der Ursache", *ibid.* 167.

[4] Usener (1890) *ad loc.*: "de structura cf. p. VII *12".

This kind of sameness may be regarded as the primary kind,[1] which may be why it is here named first by Th. It is not obvious how sameness οὐσίᾳ relates to the kinds of sameness which follow, i.e. ἀριθμῷ, εἴδει, γένει, and ἀναλογίᾳ, the first two in particular;[2] Th. is merely illustrating the various possibilities for recognizing 'the same'.

The following varieties of ταυτότης (ἀριθμῷ–εἴδει–γένει–ἀναλογίᾳ) constitute a traditional (Aristotelian) series, which proceeds from the strictest form of being ταὐτό and ἕν to the less strict varieties,[3] according to the hierarchy Aristotle imposes on them at

> *Met.* 1016 b 31 – 1017 a 3 ἔτι δὲ τὰ μὲν κατ' ἀριθμόν ἐστιν ἕν, τὰ δὲ κατ' εἶδος, τὰ δὲ κατὰ γένος, τὰ δὲ κατ' ἀναλογίαν, ἀριθμῷ μὲν ὧν ἡ ὕλη μία, εἴδει δ' ὧν ὁ λόγος εἷς, γένει δ' ὧν τὸ αὐτὸ σχῆμα τῆς κατηγορίας, κατ' ἀναλογίαν δὲ ὅσα ἔχει ὡς ἄλλο πρὸς ἄλλο. ἀεὶ δὲ τὰ ὕστερα τοῖς ἔμπροσθεν ἀκολουθεῖ, οἷον ὅσα ἀριθμῷ καὶ ἔδει ἕν, ὅσα δ' εἴδει οὐ πάντα ἀριθμῷ· ἀλλὰ γένει πάντα ἓν ὅσαπερ καὶ εἴδει· ὅσα δὲ γένει οὐ πάντα εἴδει ἀλλ' ἀναλογίᾳ· ὅσα δὲ ἀναλογίᾳ, οὐ πάντα γένει. (Cp. also *HA* 497 b 9 ff.)

Accordingly, what is ἀριθμῷ ἕν is characterized as having the strongest claim to being called the same: κυριώτατα ταὐτὸν τὸ τῷ ἀριθμῷ ἕν, *Top.* 151 b 29-30, in conformity with ordinary usage: μάλιστα δ' ὁμολογουμένως τὸ ἓν ἀριθμῷ ταὐτὸν παρὰ πᾶσι δοκεῖ λέγεσθαι, *Top.* 103 a 23-4.

For ταὐτὸ εἴδει and γένει, see

> Arist. *Top.* 103 a 10-4 εἴδει δὲ (sc. ταὐτά) ὅσα πλείω ὄντα ἀδιάφορα κατὰ τὸ εἶδός ἐστι, καθάπερ ἄνθρωπος ἀνθρώπῳ καὶ ἵππος ἵππῳ· τὰ γὰρ τοιαῦτα τῷ εἴδει λέγεται ταὐτά, ὅσα ὑπὸ ταὐτὸ εἶδος. ὁμοίως δὲ καὶ γένει ταὐτά, ὅσα ὑπὸ ταὐτὸ γένος ἐστίν, οἷον ἵππος ἀνθρώπῳ.

Sameness εἴδει is the level operative in the process of generation:

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[1] Cp. Arist. *Met.* 1016 b 9: τὰ δὲ πρώτως λεγόμενα ἓν ὧν ἡ οὐσία μία; cp. *Met.* 1021 a 12 ταὐτὰ μὲν γὰρ ὧν μία ἡ οὐσία.

According to Aristotle ταὐτά is used in as many ways as τὸ ἕν (provided that it is used "in an essential sense"): 1018 a 5 ff. τὰ δὲ καθ' αὑτὰ (sc. λέγεατι ταὐτά) ὁσαχῶσπερ καὶ τὸ ἕν· καὶ γὰρ ὧν ἡ ὕλη μία ἢ εἴδει ἢ ἀριθμῷ ταὐτὰ λέγεται καὶ ὧν ἡ οὐσία μία, ὥστε φανερὸν ὅτι ἡ ταυτότης ἑνότης τίς ἐστιν κ.τ.λ. For criticism of Aristotle's statement, see e.g. White (1971); for the many difficulties involved in the different passages in which Aristotle analyses the modes of ταὐτό or τὸ ἕν that are to be distinguished, e.g. *Top.* 103 a 6 ff., 152 b 30 ff. ἀριθμῷ–εἴδει–γένει, see e.g. Ross, Kirwan *ad locc.*

[2] Sameness οὐσίᾳ possibly applies also to entities which do not involve matter (cp. Aristotle's example of whiat is καὶ λόγῳ καὶ ἀριθμῷ ἓν in *Met.* 1054 a 32-5: οἷον σὺ σαυτῷ καὶ τῷ εἴδει καὶ τῇ ὕλῃ ἕν); in this sense, then, God and mind might be said to be 'the same', too.

[3] Cp. 129B.5-7 FHS&G (...) ἐνὸν ἀκοῦσαι λέγοντος Ἀριστοτέλους τε καὶ Θεοφράστου δύνασθαί τι τῷ μὲν ἔδει ταὐτὸν ὑπάρχειν ἕτερον ἑτέρῳ, τῷ δ' ἀριθμῷ μὴ ταὐτόν, ...

Arist. *Met.* 1049 b 27-9 εἴρηται δὲ ἐν τοῖς περὶ τῆς οὐσίας λόγοις ὅτι πᾶν τὸ γιγνόμενον γίγνεται ἔκ τινος τὶ καὶ ὑπό τινος, καὶ τοῦτο τῷ εἴδει τὸ αὐτό.

For ταὐτὸ ἀναλογίᾳ see *HP* I.1.11 τὰ δὲ ἀναλογίᾳ ταὐτὰ τὰ δ' ἄλλον τρόπον; cp. κατ' ἀναλογίαν δὲ (sc. ἕν) ὅσα ἔχει ὡς ἄλλο πρὸς ἄλλο, Arist. *Met.* 1016 b 34-5 quoted above.[1] See also *ad* 4 b 12-3.

H.1. Th. is simply adopting the Aristotelian series and leaves it to be understood that sameness by analogy is less strict than sameness by γένος (see Arist. *Met.* 1016 b 31 – 1017 a 3 above). In the present passage the increase of scope is explicitly presented as an epistemological advantage: see next note.

The precise distance spanned by entities called 'the same' in εἶδος and γένος is likely to vary with the reference of these two in each case. Given that εἶδος and γένος are relative concepts, it is not surprising that a proportional or functional sameness is sometimes characterized as an analogy also when the entities compared belong to the same γένος;[2] see e.g.

HP I.1.11 ὅλως δὲ πολύχουν τὸ φυτὸν καὶ ποικίλον καὶ χαλεπὸν εἰπεῖν καθόλου· σημεῖον δὲ τὸ μηδὲν εἶναι κοινὸν λαβεῖν ὃ πᾶσιν ὑπάρχει, καθάπερ τοῖς ζῴοις στόμα καὶ κοιλία. τὰ δὲ ἀναλογίᾳ ταὐτὰ τὰ δ' ἄλλον τρόπον. οὔτε γὰρ ῥίζαν πάντ' ἔχει οὔτε καυλὸν οὔτε ἀκρεμόνα οὔτε κλάδον οὔτε φύλλον οὔτε ἄνθος οὔτε καρπὸν οὔτ' αὖ φλοιὸν ἢ μήτραν ἢ ἶνας ἢ φλέβας, οἷον μύκης ὕδνον· ἐν τούτοις δὲ ἡ οὐσία καὶ ἐν τοῖς τοιούτοις·[3] ἀλλὰ μά-

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[1] "Beispiele werden von Aristoteles nicht gegeben; die von den Kommentatoren hinzugefügten befremden im ersten Augenblick durch ihre Trivialität (Alexander 369, 24: wie sich die Quelle zum Strom verhält, so das Herz zum Lebewesen; Asklepios p. 316, 20: wie der Kiel zum Schiff, so das Herz zum Lebewesen).", Stenzel (^{2}1933) 160 n.1 *ad loc.*

[2] Cp. Woehrle (1985) 118 with note 296. The relevance of both types to Th.' practice in the botanical treatises is illustrated by Stroemberg (1937), who refers to *HP* I.1.5: "Die Forschung κατ' ἀναλογίαν ... soll in zwei verschiedenen Weisen betrieben werden. Was bei einigen Pflanzen schwer zu verstehen ist, soll κατ' ἀναλογίαν mit anderen grossen und deutlichen Pflanzen—wie z.B. I 2,3 und I 1,11 zeigen, vor allem mit den Bäumen—verglichen werden und zwar wie in der Zoologie zwischen Tier und Tier mit der Funktion als fundamentum relationis: οὐ δεῖ δὲ οὐδὲ τοῦτο λανθάνειν εἴ τι κατ' ἀναλογίαν θεωρητέον ὥσπερ ἐπὶ τῶν ζῴων τὴν ἀναφορὰν ποιουμένους δῆλον ὅτι πρὸς τὰ ἐμφερέστατα καὶ τελειότατα. Man kann aber auch schwerverständliche Pflanzenfunktionen auf ähnliche und deutliche Tierfunktionen beziehen: καὶ ἁπλῶς δέ, ὅσα τῶν ἐν φυτοῖς ἀφομοιωτέον τινὶ τῶν ἐν τοῖς ζῴοις, ὡς ἄν τις τῷ γ' ἀνάλογον ἀφομοιοῖ." (33).

[3] The idea seems to be that if a particular kind of plant has one or more of these parts it belongs to its essence; if all parts brought forward here are absent (as is supposed to be the case with poor fungus and truffle), there is some other part, although not listed here, which constitutes its essence. The aptness of the tree as a standard for the treatment of other plants seems to be due to its showing most of those parts which are found in other kinds, too; it presumably does not imply that there is no plant whose essence consists in a part which no tree has.

λιστα ταῦτα ὑπάρχει, καθάπερ εἴρηται, τοῖς δένδροις κἀκείνων οἰκειότερος ὁ μερισμός. πρὸς ἃ καὶ τὴν ἀναφορὰν τῶν ἄλλων ποιεῖσθαι δίκαιον.

Vent. 59 (57 ὅταν ⟨δὲ⟩ ὑδάτινοι πνέωσι, τὸ ὕδωρ καταψύχει τὴν ἕξιν. τὸν αὐτὸν δὲ τρόπον καὶ ὅσα ἄλλα τῶν σωμάτων περὶ τὰς ἕξεις καθ' ἑκάτερον συμβαίνει γίνεσθαι. πλείω γάρ ἐστι τοιαῦτα καὶ ἐν πλείοσιν, ὧν ἁπάντων αἱ αὐταὶ καὶ παραπλήσιαί τινες αἰτίαν. 58 καὶ ⟨ἐπὶ⟩ τῶν καρπῶν δὲ καὶ τῶν ἄλλων τῶν τοιούτων ὁμοίως· ἅπαντα γὰρ εἰς τὴν ὑγρότητα καὶ διάχυσιν καὶ τὴν πυκνότητα καὶ σύστασιν καὶ ὅσα ἄλλα τῆς συστοιχίας ἑκατέρας ἀναχθήσεται. καὶ ἐπὶ τῶν ἀψύχων ὡσαύτως, οἷον ...) ἁπλῶς δὲ τὰ μὲν τοιαῦτα σχεδὸν ἐμφανεῖς ἔχει τὰς αἰτίας, οἷον ἀπὸ μίας ἀρχῆς ἀνάλογον ἔχοντα τὸ ἐφεξῆς.

Compare also

[Th.] *Sign.* 9 ὡς δ' αὕτως (sc. as in the case of the month) καὶ ἐπὶ τῆς ἡμέρας ἔχουσιν αἱ μεταβολαὶ ὡς ἐπὶ τὸ πολύ. ἀνατολὴ γὰρ καὶ πρωὶ καὶ μεσημβρία καὶ δείλη καὶ δύσις, καὶ τὰ τῆς νυκτὸς μέρη τὰ ἀνάλογα ταὐτὸ ποιεῖ τοῖς εἰρημένοις περὶ τῶν πνευμάτων καὶ χειμῶνος καὶ εὐδίας.

Th. adds that the possibilities of being the same may not be exhausted with the preceding series. Here again the text is uncertain. Interpreters agree that after **καὶ εἰ ἄρα** a nominative, and preferably in the plural (i.c. **διαιρέσεις**) is required (R-F), or at least more natural (L-M).[1] This is in fact a way of expression cherished by Th.:[2]

HP I.14.1 ἐξ ἀμφοτέρων δὲ καὶ τῶν ἔνων καὶ τῶν νέων εἴ τινες ἄρα μηλέαι τῶν διφόρων ἢ εἴ τι ἄλλο κάρπιμον· ...

III.7.3 (...) καὶ συκῇ καὶ τὰ ἐρινὰ τὰ προαποπίπτοντα καὶ εἴ τινες ἄρα τῶν συκῶν ὀλυνθοφοροῦσιν· ...

CP II.4.1 (of soils) καὶ σχεδὸν αἱ μὲν ἀβλαστεῖς εἰσιν αὗται, καὶ εἴ τις ἄρα διύγρος ὅλως ἢ πηλώδης.

143.8-9 FHS&G ἢ τὰ φαινόμενα λαμβάνοντας καθ' αὑτὰ ἢ ἀπὸ τούτων εἴ τινες ἄρα κυριώτεραι καὶ πρότεραι τούτων ἀρχαί.

Without ἄρα: ὅλως δὲ κατ' ἀναλογίαν ληπτέον ἐπὶ τὰς τέχνας καὶ εἴ τις ὁμοιότης ἄλλη, 8 a 19-20 above; also

CP II.7.1 καὶ αἱ καθ' ἕκαστον διαιρέσεις, οἷον ἡ θερμότης καὶ ἡ ψυχρότης, καὶ ἡ ξηρότης καὶ ἡ ὑγρότης ..., ἔτι δὲ τὰ ἀσθενῆ καὶ ἰσχυρά, καὶ βαθύρριζα καὶ ἐπιπολαιόρριζα καὶ εἴ τις ἄλλη διαφορὰ κατὰ τὰ μέρη.

V.4.6 δάφνη δὲ (καὶ εἴ τι τοιοῦτον ἕτερον) ἀπὸ τῶν καρπῶν (εἰ δ' ἄρα καὶ τοῦτο ἀπὸ σήψεώς τινος, οὐδὲν διαφέρει πρὸς τὴν αἰτίαν).

VI.1.2 αὐτὸ γὰρ τοῦτο πρῶτον ἔχει τινὰ σκέψιν, πότερα τοῖς πάθεσι τοῖς

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[1] L-M, however, opt for διαιρέσει: "et par [toute catégorie] obtenue par la division, s'il en existe outre celles-là".

[2] Cp. *ad* εἰ μὴ ἄρα 4 b 10, p. 122 above. Here again, a fairly extensive sample from Aristotle's works does not yield a single instance.

κατὰ τὰς αἰσθήσεις ἀποδοτέον, ἢ (ὥσπερ Δημόκριτος) τοῖς σχήμασιν ἐξ ὧν ἑκάστοις (εἰ μὴ ἄρα καὶ ταῦτα συνάπτει πως εἰς τὰς δυνάμεις, κἀκείνων λέγεται χάριν), ἢ[1] καὶ εἴ τις ἄλλος τρόπος ἐστὶν παρὰ τούτους.

The presence of ἄρα in this kind of combinations seems to express that the supposition has some interest in the light of what precedes.[2] The fact that in phrases of this kind ἄρα apparently does not concur with forms of ἄλλος or ἕτερος may indicate that the phrase with ἄρα is further removed from a mere '&cet.'.[3]

In view of the examples quoted above one might ask whether the addition of τινες would not have been more idiomatic. However, the present word order with **παρὰ ταῦτα** preceding διαιρέσεις may seem to be a shorter alternative for καὶ εἴ τινες ἄρα διαιρέσεις παρὰ ταῦτα. For the neuter, compare ... and ... above. In fact παρὰ ταῦτα in itself may seem to plead against the dative case, since it is questionable whether παρὰ ταῦτα could be attribute to διαιρέσει (equivalent to a potential ἄλλῃ). Cp. *HP* I.6.12 ἔνιαι δὲ τῶν ῥιζῶν πλείω δόξαιεν ἂν ἔχειν διαφορὰν παρὰ τὰς εἰρημένας: ...; VI.2.6 πάλιν δὲ ἄλλα μονοειδῆ τυγχάνοντα καὶ τῶν πρότερον εἰρημένων καὶ ἕτερα παρὰ ταῦτα· πλείω γάρ ἐστι.

Th., then, reckons with the possibility that identity might be analysed into more types than the οὐσίᾳ, ἀριθμῷ, εἴδει, γένει, ἀναλογίᾳ named here. **διαίρεσις** seems to be used in a comparatively non-technical sense, for which compare

Arist. *Top.* 101 b 23-5 δῆλον οὖν ἐκ τῶν εἰρημένων ὅτι κατὰ τὴν νῦν διαίρεσιν τέτταρα τὰ πάντα συμβαίνει γίνεσθαι, ἢ ἴδιον ἢ ὅρον ἢ γένος ἢ συμβεβηκός.

Th. may be thinking of the categories, since things may be found to be the same in any of these, too: compare

Arist. *Met.* 1018 a 35-8 ἐπεὶ δὲ τὸ ἓν καὶ τὸ ὂν πολλαχῶς λέγεται, ἀκολουθεῖν ἀνάγκη καὶ τἆλλα ὅσα κατὰ ταῦτα λέγεται, ὥστε καὶ *τὸ ταὐτὸν* καὶ τὸ ἕτερον καὶ τὸ ἐναντίον εἶναι ἕτερον καθ' ἑκάστην κατηγορίαν.

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[1] ἢ Gaza (*aut*), Schneider; εἰ U (Einarson/Link *app. crit. ad loc.*).

[2] Cp. *ad* εἰ μὴ ἄρα 4 b 10 above. That ἄρα does not imply that the possibility is called in question appears from e.g. *HP* I.14.1 ἐκ δὲ τῶν νέων ἐὰν ἄρα τι συμβῇ κυῆσαι καὶ ἀνθῆσαι (γίνεται γὰρ καὶ ταῦτ' ἐνίοις, ὥσπερ ...); see also Ps.-Arist. *Color.* 791 b 11, quoted *ad* 4 b 10 above.

[3] To express '&c.' εἰ may be absent, too: cp. Arist. *DA* 402 a 23-6 πρῶτον δ' ἴσως ἀναγκαῖον διελεῖν ἐν τίνι τῶν γενῶν καὶ τί ἐστι, λέγω δὲ πότερον τόδε τι καὶ οὐσία ἢ ποιὸν ἢ ποσὸν ἢ καί τις ἄλλη τῶν διαιρεθεισῶν κατηγοριῶν, ἔτι δὲ πότερον τῶν ἐν δυνάμει ὄντων ἢ μᾶλλον ἐντελέχειά τις· ...

That διαίρεσις is used also of a single kind of division or category[1] appears from

Arist. *Top.* 120 b 36-9 ἔτι εἰ μὴ ἐν τῇ αὐτῇ διαιρέσει τὸ γένος καὶ τὸ εἶδος, ἀλλὰ τὸ μὲν οὐσία τὸ δὲ ποιόν, ἢ τὸ μὲν πρός τι τὸ δὲ ποιόν, οἷον ἡ μὲν χιὼν καὶ ὁ κύκνος οὐσία, τὸ δὲ λευκὸν οὐκ οὐσία ἀλλὰ ποιόν, ὥστ' οὐ γένος τὸ λευκὸν τῆς χιόνος οὐδὲ τοῦ κύκνου.
See also *DA* 402 a 25 τῶν διαιρεθεῖσων κατηγοριῶν quoted n. 3 above.

Knowledge, then, may comprehend recognizing things as 'identical', in addition to the modes of ταὐτό listed, under the aspect of one of the categories; e.g. identity in the category of τὸ ποιόν may be exemplified by a thing having θερμότης just like another.[2] Distinctions of τόπος, ἕξις, θέσις τῶν μέρων, τάξις, χρόνος are important for the classification of natural entities; thus distinctions of τόπος, χρόνος, ποιεῖν and πάσχειν are essential to biology. One more distinction within the notion of sameness which Th. may have in mind is 'having the same ἀρχαί'; compare

HP IV.13.4 ᾗ δ' ὥσπερ οὐσία καὶ φύσις τοῦ δένδρου μάλιστ' ἂν φαίνοιτο τὸ στέλεχος, ὅταν μεταλλάττῃ τοῦτο, κἂν τὸ ὅλον ἕτερον ὑπολάβοι τις, *εἰ μὴ ἄρα διὰ τὸ ἀπὸ τῶν αὐτῶν ἀρχῶν εἶναι ταὐτὸ θείη·* ...

9 a 7-9 διὰ πλείστου ... διὰ τἄμφω.

τὸ (κατ' ἀναλογίαν) MSS.; τῷ Usener (1861) 274.
ἀπέχοντες MSS.; ἀπέχοντος R-F; ἀπέχοντα Kley (1936) 24 (Barthelomeus *plurimum ... sicut distantia plurimum*).

It seems possible to maintain both **ἀπέχοντες** and **τὸ** (κατ' ἀναλογίαν sc. ταὐτό) if we conceive ὡς ἂν ἀπέχοντες πλεῖστον ("considering that we are maximally far removed")[3] as an explanation of διὰ πλείστου which was not completely integrated in the syntax of this sentence. Originally it may have been a marginal annotation. In any case, τὰ μὲν δι' ἡμᾶς αὐτούς (κ.τ.λ.) links up with **διὰ πλείστου**[4] (sc. ἐστί) τὸ κατ' ἀναλογίαν (sc. ταὐτό) rather than

[1] This is essential for the reading of διαιρέσει.
[2] Cp. e.g. *CP* I.21.3 καὶ πρὸς μὲν τὴν ἑκατέρου (sc. the pericarpion and the seed) τελείωσιν καὶ πέψιν, τάχα δὲ καὶ τῶν φυτῶν γένεσιν ὅλως καὶ προϊβλαστίαν, ἅπαντα τὰ τοιαῦτα, τήν τε τοῦ ἀέρος καὶ τοῦ ἡλίου δύναμιν αἰτιατέον καὶ τὰς ἰδίας ἑκάστων φύσεις, εἴτ' οὖν ὑγρότητι καὶ ξηρότητι ⟨καὶ πυκνότητι⟩ καὶ μανότητι καὶ τοῖς τοιούτοις διαφερούσας, εἴτε θερμότητι καὶ ψυχρότητι, καὶ γὰρ ταῦτα τῆς φύσεως.
[3] For the verb, cp. Ps.-Arist. *Rhet. ad Alex.* 1425 a 4 ἐμφανίζειν ἐνδέχεται ... ὡς μακρὰν τοῖς τόποις ἀπέχοντες καὶ οὐχ ὑπάρχοντες δυνατοὶ κατὰ τοὺς προσήκοντας παραγενέσθαι καίρους.
[4] ["διά + gen. bezeichnet] sowohl örtlich als zeitlich den Zwischenraum, Abstand zwischen zwei Gegenständen, zwei Ereignissen", Mueller (1878) 10.

with διὰ πλείστου (sc. ἐπιστάμεθα): what is the same analogically spans the widest distance—in some cases owing to ourselves, i.e. we have ourselves to thank for the analogy which spans the distance, etc.:[1] see below.

That 'identity' by analogy is the loosest was implied already by the order of the series ἀριθμῷ–εἴδει–γένει–ἀναλογία.[2] From a different point of view Aristotle argues that of things which are the same (or, as Aristotle has it, similar) by analogy, some are wider apart than others:

> Arist. *Top.* 108 a 7-14 τὴν δὲ ὁμοιότητα σκεπτέον ἐπί τε τῶν ἐν ἑτέροις γένεσιν, ὡς ἕτερον πρὸς ἕτερόν τι, οὕτως ἄλλο πρὸς ἄλλο, οἷον ὡς ἐπιστήμη πρὸς ἐπιστητόν, οὕτως αἴσθησις πρὸς αἰσθητόν· καὶ ὡς ἕτερον ἐν ἑτέρῳ τινί, οὕτως ἄλλῳ ἐν ἄλλῳ, οἷον ὡς ὄψις ἐν ὀφθαλμῷ, νοῦς ἐν ψυχῇ, καὶ ὡς γαλήνη ἐν θαλάσσῃ, νηνεμία ἐν ἀέρι. μάλιστα δ' *ἐν τοῖς πολὺ διεστῶσι* γυμνάζεσθαι δεῖ· ῥᾷον γὰρ ἐπὶ τῶν λοιπῶν δυνησόμεθα τὰ ὅμοια συνορᾶν.[3] See also 108 b 21 ff. quoted *ad* συνιδεῖν 8 b 24-5, p. 413 above.

Cp. τοῦτο μὲν οὖν ὡς καθ' ὁμοιότητά τινα λεγέσθω, πορρωτέρω κείμενον *CP* I.16.6, *ad* ὁμοίωσιν 4 b 13 (p. 125).

ὡς ἄν with a participle does not necessarily connote an unreal supposition: cp. e.g.

> *HP* IV.13.1 περὶ δὲ βραχυβιότητος φυτῶν καὶ δένδρων τῶν ἐνύδρων ἐπὶ τοσοῦτον ἔχομεν ὡς ἂν καθ' ὅλου λέγοντες, ὅτι βραχυβιώτερα τῶν χερσαίων ἐστί, καθάπερ καὶ τὰ ζῷα.
>
> Gal. *Nat. Fac.* II.115.12 Kühn ἐν μὲν γὰρ τοῖς ἀκμάζουσι, καὶ μάλιστ' εἰ φύσει θερμότεροι, καὶ βίον εἶεν βιοῦντες ταλαίπωτερον, ἅπαν εἰς ξανθὴν χολὴν μεταβάλλει τὸ μέλι· τοῖς γέρουσι δ' ἱκανῶς ἐστιν ἐπιτήδειον, ὡς ἂν οὐκ εἰς χολήν, ἀλλ' εἰς αἷμα ἀλλοίωσιν ἐν ἐκείνοις λαμβάνον.
>
> Diod. Sic. I.88.1 τὸν δὲ τράγον ἀπεθέωσαν, καθάπερ καὶ παρὰ τοῖς Ἕλλησι τετιμῆσθαι λέγουσι τὸν Πρίαπον, διὰ τὸ γεννητικὸν μόριον· τὸ μὲν γὰρ ζῷον εἶναι τοῦτο κατωφερέστατον πρὸς τὰς συνουσίας, τὸ δὲ μόριον τοῦ σώματος τὸ τῆς γενέσεως αἴτιον τιμᾶσθαι προσηκόντως, ὡς ἂν ὑπάρχον ἀρχέγονον τῆς τῶν ζῴων φύσεως.[4]

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[1] *Contra* R-F "this appearance of distance being due sometimes to ...".

[2] See *ad* 9 a 4-6.

[3] Cp. Aristotle's precept that metaphors should be drawn from objects which are not too closely or too obviously connected, οἷον καὶ ἐν φιλοσοφίᾳ τὸ ὅμοιον καὶ *ἐν πολὺ διέχουσι* θεωρεῖν εὐστόχου (Arist. *Rhet.* 1412 a 11 ff.).

Bremer (1980) 358 f. argues that while τὸ ὅμοιον is used for the likeness expressed by the metaphor, ταὐτό indicates the relationship between the objects themselves.

[4] Cp. Palm (1955): "ὡς ἄν, das bei einer Partizipialkonstruktion eigentlich eine subjektive Nuance und etwas Irreales ausdrückt ..., hat bei [Diodorus Siculus] oft eine Bedeutung, die ἅτε entspricht ... Von der subjektiven Nuance merken wir nicht viel." (99). "Soweit sie nicht als eine völlig erstarrte Form verwendet wird, scheint, dass sie einer Neigung der hellenistischen Prosa dient, den Ausdruck zu dämpfen; was wirklich eine Ursache ist, wird so an-

ibid. II.57.4 πολυχρονίους δ' εἶναι τοὺς ἀνθρώπους καθ' ὑπερβολήν, ὡς ἂν ἄχρι τῶν πεντήκοντα καὶ ἑκατὸν ἐτῶν ζῶντας καὶ γινομένους ἀνόσους κατὰ τὸ πλεῖστον.

Cp. also 152.2-3 FHS&G εἶναι ... τὴν μὲν κίνησιν καὶ ἐνέργειαν ὡς ἂν ἐν αὐτῇ περιεχομένην.[1]

With τὸ κατ' ἀναλογίαν, **τὰ μὲν** ..., **τὰ δὲ** ..., **τὰ δὲ** ... has 'adverbial' value.[2] In some cases the analogy is able to bridge the distance owing to ourselves, in others owing to the subject-matter at issue, and in others again owing to to both.
For this use of **ὑποκείμενον**, compare e.g.

Arist. *Rhet.* 1355 b 27 ff. (...) ἑκάστη (sc. τέχνη) περὶ τὸ αὑτῇ ὑποκείμενόν ἐστι διδασκαλικὴ καὶ πειστική, οἷον ἰατρικὴ περὶ ὑγιεινῶν καὶ νοσερῶν, καὶ γεωμετρία περὶ τὰ συμβεβηκότα πάθη τοῖς μεγέθεσι, καὶ ἀριθμητικὴ περὶ ἀριθμῶν, κ.τ.λ.; also 1358 a 22 περὶ οὐδὲν ... ὑποκείμενόν ἐστιν ("the general commonplaces have no special subject-matter" *RevOT*).

The first group (τὰ μὲν δι' ἡμᾶς αὐτούς) is likely to comprise first of all technical analogies, e.g. we have ourselves to thank for the elaborate analogy between the movement of animals and automatic puppets or toy chariots,[3] or that between the tail of a bird and the rudder of a ship;[4] and presumably also for the potentially fertile analogy between the material component of nature and the material used in the τέχναι at 8 a 20 above, and for mathematical analogies such as that between the movement of the heavenly bodies and the infinity of a circle, or between the alleged shape of elementary bodies and mathematical figures.

In other cases, the analogy is suggested by the subject-matter itself, as with analogies between different genera of organic nature as they appear frequently in the botanical treatises, e.g. between seeds and eggs[5] or between feathers and scales.[6]

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gegeben, als *wäre* es die Ursache. Ingefolge gewohnheitsmässigen und gedankenlosen Gebrauchs hat sich diese subjektive Nuance oft verwischt." (*ibid.* 100). I owe these references to Professor S.L. Radt.

[1] Quoted *ad* 7 b 9-15, p. 338 n. 1.

[2] Thus R-F. With τῷ this sequence furnishes the grammatical object of an implicit ἐπιστάμεθα.

[3] Arist. *MA* 701 b 2 ff.

[4] Arist. *IA* 710 a 1 ff.

[5] *CP* I.7.1 τὰ δὲ σπέρματα πάντων ἔχει τινὰ τροφὴν ἐν αὑτοῖς, ἣ συναποτίκτεται τῇ ἀρχῇ καθάπερ ἐν τοῖς ᾠοῖς· ᾗ καὶ οὐ κακῶς Ἐμπεδοκλῆς εἴρηκεν φάσκων "ᾠοτοκεῖν μακρὰ δένδρεα"· παραπλησία γὰρ τῶν σπερμάτων ἡ φύσις τοῖς ᾠοῖς.

[6] Arist. *PA* 644 a 21-2.

The third, more complex class seems to involve cases where the subject-matter itself in the course of our investigations suggests an analogy, which is 'grasped' by us.[1] This seems to be how we acquire knowledge of the cosmos (or being) as such, or of God: cp. e.g. the proportional method suggested 4 b 13-5, or the analogy between cosmos and such organic wholes as a πόλις or a ζῷον (8 a 4-6), and between the movement of the cosmos and that of a ζῷον (10 a 10-9).[2]

VIII.3 (9 a 10 – b 1): *Since knowing applies in various ways, our point of departure should be the method peculiar to each kind of object. For there is a peculiar method for each kind of object (e.g. objects of thought, natural objects); and* within *these kinds too a division applies (e.g. heavenly bodies, sublunary entities and among the latter animals, plants, inanimate things). Only in the case of mathematics the division is clear-cut.*
If a peculiar method can be identified in the case of the principles too, a division should be made here, too. The method involved might be described as knowledge by analogy—i.e., by their being known by the unknowable (sc. mind). Compare the (more obvious) capacity of seeing things by means of the faculty of vision which cannot be seen itself.

We should try, then, to make a complete inventory of kinds of objects to which a proper method may be assigned, which would provide us with the sum total of applications of 'knowing'. The definition of 'knowing', however, (which is required for answering these questions) is difficult, considering that where the use of a term is essentially connected with its particular reference in each case, no common characterization can be found.

9 a 10-1 πλεοναχῶς δ' ... μεταδιωκτέον;

What is the epistemological counterpart to the beginning of this Chapter (τὸ δὲ ὂν ὅτι πολλαχῶς, φανερόν 8 b 10) is now stated explicitly as something which has now been established (**πλεοναχῶς δ' ὄντος τοῦ ἐπίστασθαι, ...**).[3] This was not only implied by the earlier formula[4] but also presupposed by

[1] Cp. 8 b 15-6.
[2] Cp. also 7 b 19-22.
[3] Diogenes Laertius lists (V.49, FHS&G 1.267) a title τίνες οἱ τρόποι τοῦ ἐπίστασθαι (one book: "wahrscheinlich ein Stück einer grösseren Schrift", Regenbogen 1382, who adds the suggestion that 9 a 4 – b 8 of our treatise may provide an outline of the argument; "highly speculative", Sollenberger (1984) 363.).
[4] See p. 393 *ad loc.*

ἐπιστήμη πᾶσα (8 b 20-1).[1] The distinction between between πολλαχῶς and πλεοναχῶς is in that with being it was evident that we had an abundant variety, whereas with knowing the very fact that there is more than one way required proof.

Here again the issue is not primarily a semantic distinction;[2] it is how, given that there are different forms of knowing corresponding to differences in being, knowledge of each object should be acquired.

The distinction between particulars and universals, and the corresponding difference in the way we acquire knowledge of these, may be relevant here; compare

Arist. *An. Pr.* 67 a 16-21 τὸ γὰρ εἰδέναι πᾶν τρίγωνον ὅτι δύο ὀρθαῖς οὐχ ἁπλοῦν ἐστιν, ἀλλὰ τὸ μὲν τῷ τὴν καθόλου ἔχειν ἐπιστήμην, τὸ δὲ τὴν καθ' ἕκαστον. οὕτω μὲν οὖν ὡς τῇ καθόλου οἶδε τὸ Γ ὅτι δύο ὀρθαί, ὡς δὲ τῇ καθ' ἕκαστον οὐκ οἶδεν, ὥστ' οὐχ ἕξει τὰς ἐναντίας.

133 FHS&G (= Alex. Aphr. *In Top.* 110 b 16) ὅμοιον τοῦτο, οὗ καὶ αὐτοῦ Θεόφραστος ἐν τῷ Περὶ τῶν ποσαχῶς μέμνηται, τὸ ἐπίστασθαι πᾶν τρίγωνον ὅτι δυσὶν ὀρθαῖς ἴσας ἔχει τὰς τρεῖς γωνίας· ἢ γὰρ ὡς καθόλου ἢ ὡς καθ' ἕκαστα πάντα. ἀνασκευάζειν οὖν θέλοντας τὸ ὅτι ὁ γεομέτρης ἐπίσταται πᾶν τρίγωνον δυσὶν ὀρθαῖς ἴσας ἔχον τὰς τρεῖς γωνίας, χρὴ ἐπὶ τὰ καθ' ἕκαστα μετάγειν τὸν λόγον (καὶ γὰρ τοῦτο σημαίνεται) καὶ λαβόντας ὅτι ὃ μὴ οἶδέ τις ὅτι ἐστὶ τρίγωνον, οὐδ' εἰ δυσὶν ὀρθαῖς ἴσας ἔχει οἶδε, τόδε τι προχειρισαμένους λέγειν ὅτι "τοῦτο δὲ οὐκ οἶδεν· οὐδ' ἄρα, εἰ δυσὶν ὀρθαῖς ἴσας ἔχει, οἶδεν· οὐ πᾶν ἄρα οἶδε."

Arist. *An. Pr.* 67 b 3-5 τὸ γὰρ ἐπιστάσθαι λέγεται τριχῶς, ἢ ὡς τῇ καθόλου ἢ ὡς τῇ οἰκείᾳ ἢ ὡς τῷ ἐνεργεῖν,[3] ὥστε καὶ τὸ ἠπατῆσθαι τοσαυταχῶς.

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[1] These considerations add to R-F's refutation (xi-ii) of USENER's objections against the passage as and where it stands: "(...) ich sehe nicht ein, wie die αἰτίαι als Ziel des Wissens [8 b 10-2] vorausgesetzt werden durften, wenn erst nachher [9 a 24-6 ἡ δ' ἀρχὴ ... τί τὸ ἐπίστασθαι] der Begriff des Wissens gesucht wurde; noch weniger aber, wie der Verfasser von den Arten des Erkennens ganz unbekümmert handeln und darauf erst nach einer hinleitenden Erörterung sich zu der Frage nach den verschiedenen Arten des Erkennens gedrängt fühlen konnte" (1861) 274; according to him the passage should fill the lacuna in 9 b 1 (see p. 445 with n. 2, below), or, his final proposal ((1861) 270), at the end of Chapter III, after the passage about the difference between the method of metaphysics and that of "the other" sciences. See also *ad* 9 a 23-4, p. 441 n. 3.

[2] Such as that between *possession* and *use* of knowledge at Arist. *EN* 1146 b 31-3: ... διχῶς λέγομεν τὸ ἐπίστασθαι (καὶ γὰρ ὁ ἔχων μὲν οὐ χρώμενος δὲ τῇ ἐπιστήμῃ καὶ ὁ χρώμενος λέγεται ἐπίστασθαι), cp. *Met.* 1017 b 3-5, 1087 a 15-6. See next note.

[3] Cp. the "tantalizing" (ANNAS *ad loc.*) passage *Met.* 1087 a 15 ff. where Aristotle is criticizing the theory of Ideas: ἡ γὰρ ἐπιστήμη, ὥσπερ καὶ τὸ ἐπίστασθαι, διττόν, ὧν τὸ μὲν δυνάμει, τὸ δὲ ἐνεργείᾳ. ἡ μὲν οὖν δύναμις ὡς ὕλη καθόλου οὖσα καὶ ἀόριστος τοῦ καθόλου καὶ τοῦ ἀορίστου ἐστίν, ἡ δ' ἐνέργεια ὡρισμένη καὶ ὡρισμένου, τόδε τι οὖσα τοῦδέ τινος. ... (1087 b 24-5) ἀλλὰ δῆλον ὅτι ἔστι μὲν ὡς ἡ ἐπιστήμη καθόλου, ἔστι δ' ὡς οὔ.

Cp. the two levels of 'the same' at 8 b 25-7 above (ἤτοι κοινῇ καὶ καθόλου λεγόμενον ἢ ἰδίᾳ πως καθ' ἕκαστον), and the two classes of objects distinguished by their end at 8 b 27 – 9 a 4 (ἔστιν δ' ἔνια, ὧν καθόλου τέλος (...), τῶν δὲ τὸ ἐν μέρει ...).

ἕκαστα refers to each object of knowledge (cp. 7 a 17 ὡρισμέναι γὰρ ἑκάστων αἱ φύσεις ὡς εἰπεῖν, 7 a 20 τὸ τοὺς λόγους ἑκάστοις περιθεῖναι), in the present context regardless of whether this is an individual or a class.[1]

For **μεταδιωκτέον** cp. *HP* I.2.3 διὰ τῶν γνωριμωτέρων μεταδιώκειν δεῖ τὰ ἀγνώριστα.

9 a 11-5 ἀρχὴ καὶ μέγιστον ... τῶν ἀψύχων·

For the use of **ἀρχή**, cp. 4 a 9 (see p. 85 above); **καὶ μέγιστον** adds that identifying the οἰκεῖος τρόπος is not just the first step but the main thing.

The question of the method to be applied in each case starts with, and mainly depends upon, (our identifying) the proper 'mode' (see below), sc. that which is appropriate to the class to which the object in question belongs.[2] It will be seen in what follows that, 'class' being a relative notion, it is not easy to decide how many relevant 'classes'—and thus, how many methods—should be distinguished.[3]

ὁ οἰκεῖος τρόπος ("manner, mode") is somewhat vague, although a specification like ὁ τρόπος τῆς ζητήσεως[4] might seem to be implied by the context; cp. *HP* I.1.4 ὅσα γὰρ μὴ οἷόν τε ἀφομοιοῦν περίεργον τὸ γλίχεσθαι πάντως, ἵνα μὴ καὶ τὴν οἰκείαν ἀποβάλλωμεν θεωρίαν. The lack of a specification enhances the parallelism between knowledge and being. Just how

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[1] *Contra* R-F: "each class of things" (thus TRICOT, REALE). Cp. REALE/CATAN: "the knowledge of each thing", L-M "chacun des objets particuliers".

[2] Cp. Arist. *GA* 747 b 28 ff. ἴσως δὲ μᾶλλον ἂν δόξειεν ἀπόδειξις εἶναι πιθανὴ τῶν εἰρημένων λογική—λέγω δὲ λογικὴν διὰ τοῦτο ὅτι ὅσῳ καθόλου μᾶλλον πορρωτέρω τῶν οἰκείων ἐστὶν ἀρχῶν. ἔστι δὲ τοιαύτη τις. ... (748 a 7 ff.) οὗτος μὲν οὖν ὁ λόγος καθόλου λίαν καὶ κενός. οἱ γὰρ μὴ ἐκ τῶν οἰκείων ἀρχῶν λόγοι κενοί, ἀλλὰ δοκοῦσιν εἶναι τῶν πραγμάτων οὐκ ὄντες. οἱ γὰρ ἐκ τῶν ἀρχῶν τῶν γεωμετρικῶν γεωμετρικοί, ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων· κ.τ.λ.

[3] This is one reason why in the end the question *ποσαχῶς* τὸ εἰδέναι remains without an answer: see 9 a 23-4 with commentary *ad loc.*

[4] Arist. *An. Pr.* 46 b 36, cp. ἡ μέθοδος 46 b 26; *Top.* 108 a 33-4 ἔστι δὲ οὐκ οἰκεῖος ὁ τρόπος οὗτος τῆς διαλεκτικῆς; *ibid.* 158 b 8 κατὰ τὴν οἰκείαν μέθοδον. In *GC* 327 a 30-1 τὸν αὐτὸν τρόπον τῆς μεθόδου a less technical way of phrasing seems to be concerned; cp. also ὁ τρόπος τῆς ἀποδείξεως *PA* 639 b 30-640 a 1.

With regard to being rather than knowledge *Ign.* 2 οὐδὲ ὅλως ὁ τρόπος (sc. τῆς γενέσεως) οἰκεῖος, ἀλλὰ πάντων, ὥσπερ ἐλέχθη, φυσική τις μεταβολὴ καὶ γένεσις.; (ὁ τρόπος) τῆς ἀνάγκης *PA* 640 a 1.

closely the mode of knowing and the mode of being are linked is suggested by the fact that, instead of defining or exemplifying the different 'proper methods', Th. goes on to bring forward examples (**οἷον**) of those classes to which the objects of knowledge may belong. The interrelatedness of modes of knowing and modes of being is exactly what makes it hard to decide on the number of proper methods to be distinguished; see esp. *ad* ποσαχῶς 9 a 24 and τίνων 9 b 3.

With the fairly comprehensive fist two provinces, that of the first or intelligible things (**τὰ πρῶτα καὶ νοητά**) and that of the things of nature,[1] Th. may have in mind the accepted methodological distinction referred to in 6 b 17-22, that whereas in the science of nature one *starts from* the principles, in metaphysics the quest is *for* the principles.[2] With regard to the 'first things' or principles no further distinction is made here—as is the case with the things of nature and the mathematical objects—but the requirement of a further division there too comes up in the discussion of the proper method for them in 9 a 18-23.

From the phrase (τὰ) **ὑπὸ τὴν φύσιν**[3] ("things which fall under the heading of nature")[4] it appears that φύσις is conceived as a 'class';[5] as in Arist. *Met.* 1060 b 34 ὑπὸ μίαν ἐπιστήμην, *EN* 1104 a 7-8 οὔτε ... ὑπὸ τέχνην οὔθ' ὑπὸ παραγγελίαν οὐδεμίαν πίπτει.

Next the province of nature (**αὐτῶν τε τούτων**) is sub-divided in a hierarchical order of decreasing power or authority.[6] **τὰ ἐν ἀρχῇ** refers to the heavenly bodies;[7] cp. *ad* τὰ ἀΐδια 4 a 16 above. **τὰ**[8] **ἑπόμενα** are presumably the seasons and the (other) meteorological phenomena, which in turn influence organic nature.[9]

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[1] For this opposition cp. 4 a 2-3, 4 a 10-1.

[2] See notes *ad loc.*

[3] Cp. the less technical term τὰ τῆς φύσεως: 4 a 11, 4 b 3, 4 b 23 – 5 a 1, 11 a 21.

[4] See R-F.

[5] Cp. τὰ ὑπὸ τὰ καθόλου 8 b 18-9.

[6] Cp. R-F *ad loc.*: "The order is peculiar; one would expect the order to be—'elements, comparatively simple (inorganic) compounds, higher compounds (i.e. plants and animals)'. The order intended is, however, neither one of increasing complication nor one of temporal succession but presumably one of dignity."

[7] Thus R-F. For the expression cp. Thuc. II.37 τῶν ... αἰεὶ ἐν ἀρχῇ ὄντων.

[8] WIMMER's addition of the article seems necessary; it may have been omitted under the influence of the two previous compound phrases, each of which, unlike the present one, refers to *one* class of entities.

[9] Cp. 7 a 22 ff. πλὴν εἰ συμβαίνει τῇ ἑτέρων τάξει καὶ μεταβολῇ μορφάς τε παντοίας καὶ ποικιλίας γίνεσθαι τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν· ὧν δὴ μέγιστόν τινες παράδειγμα ποιοῦνται τὰ περὶ τὰς ὥρας τὰς ἐτησίους, ... For the last stage also ἐν αἷς καὶ ζῴων καὶ φυτῶν καὶ καρπῶν γενέσεις, οἷον γεννῶντος τοῦ ἡλίου 7 b 4-5.

Finally (**ἐσχάτων**), at the lowest level in the hierarchy of power there is inorganic nature, where the δυνάμεις inherent in matter are least responsive to the impulses from the heavenly bodies, so that the impulses do not succeed in bringing matter to generation or other forms of κίνησις. This province too requires its own τρόπος.

As far as nature and its sub-divisions are concerned the method envisaged, starting, as we saw, from the relevant principles, will vary with the nature of the ἀρχαί involved;[1] compare

> Arist. *DA* 402 a 18-22 εἰ δὲ μὴ ἔστι μία τις καὶ κοινὴ μέθοδος περὶ τὸ τί ἐστιν, ἔτι χαλεπώτερον γίνεται τὸ πραγματευθῆναι· δέησει γὰρ λαβεῖν περὶ ἕκαστον τίς ὁ τρόπος. ἐὰν δὲ φανερὸν ᾖ πότερον ἀπόδειξίς ἐστιν ἢ διαίρεσις ἤ καί τις ἄλλη μέθοδος, ἔτι πολλὰς ἀπορίας ἔχει καὶ πλάνας, *ἐκ τίνων δεῖ ζητεῖν· ἄλλαι γὰρ ἄλλων ἀρχαί*, καθάπερ ἀριθμῶν καὶ ἐπιπέδων.[2]

For the complication that the level of aggregation at which a proper method applies is not always easy to distinguish, see 9 a 23 ff. and 9 b 1 ff.

9 a 15-8 ἔστιν γάρ τι ... ἱκανῶς.

ἔστιν γάρ τι καθ' ἕκαστον γένος ἴδιον explains οἰκεῖος in particular, making explicit what was suggested by the examples advanced in what precedes, viz. that an οἰκεῖος τρόπος (i.e., mode of being as well as mode of knowledge: see note *ad loc.*) applies to each *class* of entities. The statement harmonizes with, and in effect completes, what was said in 8 b 20-1 above: σχεδὸν δὲ καὶ ἐπιστήμη πᾶσα τῶν ἰδίων, which now appears to obtain not only for particulars, but also for classes—these, too, having a characteristic peculiar to them (although shared by all members of the class in question). This, then, seems to be where (1) the idea of a science whose task it is to discern what is the same in a plurality of things, and (2) the conception that the object of science consists in ἴδια, converge.

In spite of the broad, and (one might say) obvious division of reality presented in what precedes, the present assertion leaves unspecified at what level of aggregation 'something particular' which calls for a proper method can be found. Possibly an οἰκεῖος τρόπος simply applies in the case of any group of entities to be distinguished from some other group for any intel-

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[1] Cp. also Ps.-Arist. *MM* 1183 a 39 – b 6 (though one of the objects involved does not belong to the province of nature): (...)· δεῖ γὰρ τὰς ἀρχὰς οἰκείας λαμβάνειν. ἄτοπον γάρ, εἴ τις βουλόμενος τὸ τρίγωνον ὡς δυσὶν ὀρθαῖς ἴσας ἔχον δεῖξαι, λάβοι ἀρχὴν ὅτι ἡ ψυχὴ ἀθάνατος. οὐ γὰρ οἰκεία, δεῖ δὲ τὴν ἀρχὴν οἰκείαν εἶναι καὶ συνημμένην· νῦν δὲ καὶ ἄνευ τοῦ τὴν ψυχὴν εἶναι ἀθάνατον δείξει τις δυσὶν ὀρθαῖς ἴσας ἔχον τὸ τρίγωνον.

[2] Cp. *ad* 9 a 16-8.

lectual or practical purpose. If so, the function of the concept is rather to prevent that relevant distinctions are neglected, than to discriminate between ('higher') classes which have, and ('lower') classes which do not have their own proper method.

ὥσπερ καί introduces the mathematical objects as corroborating evidence not included in what precedes (cp. ὥσπερ καὶ τὰ αἴδια τῶν φθαρτῶν 4 a 16-7 above), this in accordance with the fact that the objects of mathematics, although unmistakably νοητά, do not for Th. qualify as "πρῶτα": see 4 a 18-b 5 above with commentary. The example is welcome here since it concerns a generally recognized field of investigation[1] showing clear-cut sub-divisions according to the objects and the proper methods involved in each case.

It seems likely, then, that (ὥσπερ καὶ) **ἐν τοῖς μαθηματικοῖς** does not provide an example of a γένος showing some peculiarity (such as 'being without motion but not separate'),[2] but that ἐν should be interpreted as "in the case of", i.e. "within (the more comprehensive class of)". In analogy with τὰ ἐν ἀρχῇ καὶ τὰ ἑπόμενα μέχρι ζῴων καὶ φυτῶν καὶ ... τῶν ἀψύχων we are supposed to think of different types of mathematical objects (such as numbers, points, lengths, surfaces, steroids) each having something peculiar to them. The frequent use of a relative followed by καί to introduce corroborative evidence seems to rule out the possibility that **ὥσπερ καί** is said ironically (viz. as hinting that even in objects without any basis in reality, in each class something peculiar may be distinguished).

With **ἔχει δὲ** κ.τ.λ. Th. adds that different kinds of mathematical sciences are distinguished corresponding to the different objects discerned. **τὰ μαθήματα** "doctrina mathematica" BONITZ s.v.; cp. note *ad* ἐν τοῖς μαθηματικοῖς 4 a 18. For the idea that in mathematics there is a hierarchy analogous to that to be found in natural philosophy, cp. Arist. *Met.* 1004 a 8 (ἔστι γὰρ ὁ φιλόσοφος ὥσπερ ὁ μαθηματικὸς λεγόμενος· καὶ γὰρ αὕτη ἔχει μέρη, καὶ πρώτη τις καὶ δευτέρα ἔστιν ἐπιστήμη καὶ ἄλλαι ἐφεξῆς ἐν τοῖς μαθήμασιν.), below.

For the idea that there is a paradox involved in identifying something particular in a group which is otherwise (or rather, 'in a way': **πως**) homogeneous involves a paradox (**καίπερ**) compare

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[1] Notwithstanding the differences involved, there *is* something common to them, presumably the method of ἀφαίρεσις: see Arist. *Cael.* 299 a 16, *EN* 1142 a 18, *PA* 641 b 10-1.

[2] ἔνια περὶ ἀκίνητα μὲν οὐ χωριστὰ δὲ ἴσως Arist. *Met.* 1026 a 14-5 (the qualification involved in ἔνια being due to the objects of astronomy).

CP I.20.2 ἀλλ' εἰ ἄρα μόνῳ τῶν δένδρων τῷ φοίνικι τοῦτο συμβαίνει; τὸ γὰρ ἴδιον ἐν τοῖς ὁμογενέσιν θαυμάζεται.
HP II.5.7 χρὴ δὲ καὶ ἐν αὐτοῖς τοῖς ὁμογενέσι μὴ ἀγνοεῖν τὰς οἰκείας (sc. χώρας).
CP II.4.8 (...), δεῖ μὴ ἀγνοεῖν ποῖα τῶν φυτῶν τὰ οἰκεῖα καὶ ὅλως καὶ τῶν ὁμογενῶν, ὅπερ οἵ γ' ἀμπελουργοὶ πειρῶνται διαιρεῖν, (...).

In the light of this, it is likely that Th. is referring not so much to a bipartition of mathematical studies into a universal science on the one hand and the several specialized fields of mathematical knowledge on the other, as in

Arist. *Met.* 1026 a 23-7 ἀπορήσειε γὰρ ἄν τις πότερόν ποθ' ἡ πρώτη φιλοσοφία καθόλου ἐστιν, ἢ περί τι γένος καὶ φύσιν τινὰ μίαν (οὐ γὰρ ὁ αὐτὸς τρόπος οὐδ' ἐν ταῖς μαθηματικαῖς, ἀλλ' ἡ μὲν γεωμετρία καὶ ἀστρολογία περί τινα φύσιν εἰσίν, ἡ δὲ καθόλου πασῶν κοινή)· ... ,[1]

but rather to differences between the specialized fields of knowledge themselves (hence **αὐτὰ** τὰ μ.), corresponding to the different objects, each with the ἀρχαί peculiar to them: cp. Arist. *DA* 402 a 21-2 (ἄλλαι γὰρ ἄλλων ἀρχαί, καθάπερ ἀριθμῶν καὶ ἐπιπέδων, quoted in the preceding note),[2] and *GA* 747 b 28 ff., p. 430 note 2 above. Also

Arist. *Met.* 1004 a 2-9 καὶ τοσαῦτα μέρη φιλοσοφίας ἐστὶν ὅσαιπερ αἱ οὐσίαι· ὥστε ἀναγκαῖον εἶναί τινα πρώτην καὶ ἐχομένην αὐτῶν. ὑπάρχει γὰρ εὐθὺς γένη ἔχον τὸ ὂν [καὶ τὸ ἕν].[3] διὸ καὶ αἱ ἐπιστῆμαι ἀκολουθήσουσι τούτοις. ἔστι γὰρ ὁ φιλόσοφος ὥσπερ ὁ μαθηματικὸς λεγόμενος· καὶ γὰρ αὕτη ἔχει μέρη, καὶ πρώτη τις καὶ δευτέρα ἔστιν ἐπιστήμη καὶ ἄλλαι ἐφεξῆς ἐν τοῖς μαθήμασιν.
GA 748 a 9-11 οἱ γὰρ ἐκ τῶν ἀρχῶν τῶν γεωμετρικῶν γεωμετρικοί (sc. λόγοι), ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων· (...).
An. Pr. 46 a 17-22 ἴδιαι δὲ καθ' ἑκάστην εἰσιν αἱ πλεῖσται (sc. ἀρχαί). διὸ τὰς μὲν ἀρχὰς τὰς περὶ ἕκαστον ἐμπειρίας ἐστὶ παραδοῦναι. λέγω δ' οἷον τὴν ἀστρολογικὴν μὲν ἐμπειρίαν τῆς ἀστρολογικῆς ἐπιστήμης (ληφθέντων γὰρ ἱκανῶς τῶν φαινομένων οὕτως εὑρέθησαν αἱ ἀστρολογικαὶ ἀποδείξεις), ὁμοίως δὲ καὶ περὶ ἄλλην ὁποιανοῦν ἔχει τέχνην τε καὶ ἐπιστήμην· ...

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[1] Also Arist. *Met.* 1064 b 8-9.
[2] "The definitions of the unit and of number as the sum of units (...) belong to discrete quantity (διωρισμένον ποσόν), whereas those of surface and line belong to continuous quantity (τὸ συνεχές). Such definitions form the starting-points or principles of the respective sciences" (Hicks *ad loc.*).
For complications involved in the division of mathematical sciences see e.g. Arist. *An. Post.* 75 a 38 ff., 76 a 9 ff., 78 b 35 ff.
[3] del. Natorp, Ross.

The division of mathematical sciences is sufficiently clear (**διῄρηται δ' ἱκανῶς**). The point is apparently that the distinction is "sufficiently familiar" (thus R-F), because it "has been sufficiently well threshed out in the School" (R-F *ad loc.*). Compare

> Arist. *Met.* 1027 b 18 περὶ μὲν οὖν τοῦ κατὰ συμβεβηκὸς ὄντος ἀφείσθω. διώρισται γὰρ ἱκανῶς· ...
>
> *HP* I.4.3 ἅπαντα δ' οὖν καὶ ταῦτα καὶ τὰ ἄλλα διοίσει, καθάπερ εἴρηται, ταῖς τε τῶν ὅλων μορφαῖς καὶ ταῖς τῶν μορίων διαφοραῖς, ἢ τῷ ἔχειν τὰ δὲ μὴ ἔχειν, ἢ τῷ πλείω τὰ δ' ἐλάττω, ἢ τῷ ἀνομοίως ἢ ὅσοι τρόποι διῄρηνται πρότερον.

In their division into relatively clear-cut classes mathematical objects, and accordingly mathematics, contrast with the differentiation of degree which applies to natural objects (and the corresponding kinds of knowledge). As such they are apt to illustrate how within a particular field of knowledge further specializations can be distinguished, each with its own method of inquiry. Cp. Aristotle's claim that the use of the term 'philosohper' is just like that of 'mathematician' in Arist. *Met.* 1004 a 2-9, above.

To a Peripatetic audience, even if according to Th. himself at least mathematics owed its comparative distinct division to the fact of its objects being products of human contrivance,[1] the example would be convincing all the same. Any irony there might be is to be inferred from Th.' scepticism with regard to mathematical objects as conveyed in the first chapter of this treatise.[2]

9 a 18-23 εἰ δὲ καὶ ἔνια ... τὸ ὁρατόν.

ὁρατόν PJCL Isḥāq; ἀορατόν A.

A notoriously puzzling passage,[3] the difficulties of which concern not only its purport and the attribution of the opinion(s) that might be referred to, but also the phrasing of the latter part (see *ad* ἤ and καθάπερ εἴ τις in 22-3 especially), as well as the variant readings of ὁρατόν and ἀόρατον (adopted by all modern interpreters) in 23.

As in 5 b 26 above, **εἰ δὲ καί** introduces a further point for discussion, with καί adding a problem ("and also, if certain things ..."), not implying that **ἔνια** are a new class.

[1] See Chapter I, 4 a 21-23.
[2] Cp. *ad* καί 9 a 16, p. 433 above.
[3] See e.g Reale *ad loc.*; Reale/Catan 417-8.

In the discussion of the several kinds of 'knowing' to be distinguished according to the different objects involved, one might well ask what kind of knowledge we have of those entities which constitute the limits of knowledge and being, i.e. of entities whose cause cannot be known, since there is none.

Th. claims that if the principles are 'known' by their constituting the limits of knowledge, knowledge of which is impossible as such, this paradoxical way of 'knowing' things has to count as the method[1] peculiar to them (**ἴδιος ἂν ὁ τρόπος εἴη**). This paradox is expressed by the paradox **γνωστὰ τῷ ἄγνωστα εἶναι**, which does not derive from Th. himself (καθάπερ τινές φασιν), and to which Th. will propose an alternative in what follows.

Interpreters are at variance about the source of this paradox. The discussion is complicated by the fact that Greek γνωστός does not distinguish between 'known' and 'knowable'[2]—or perhaps rather by the fact that English does.

R-F, who favour the 'non-modal' interpretation for both adjectives, hold that the reference is to a "dialectical argument quoted in Arist. *Rhet.* 1402^a 4-7, presumably from some sophist: ἐν μὲν τοῖς διαλεκτικοῖς (*sc.* γίγνεται φαινόμενος συλλογισμός) ... ὅτι ἐπιστητὸν τὸ ἄγνωστον, ἔστιν γὰρ ἐπιστητὸν τὸ ἄγνωστον ὅτι ἄγνωστον, 'the unknown is known, for it is known to be unknown'." (so TRICOT); one may compare Arist. *Met.* 1030 a 33-4 τὸ μὴ ἐπιστητὸν ἐπιστητόν serving as an example of the possibility to use words in a qualified sense (προστιθέντας καὶ ἀφαιροῦντας): "adding and subtracting (sc. qualifications)").

MERLAN (^{3}1975, 188 n.) argues that this supposed reference is not in keeping with the purport of the present passage, since Th. is obviously taking seriously the idea referred to.[3] MERLAN himself prefers the modal interpretation ("knowable by being unknowable") and suggests (*o.c.* 187-8) that we have in Th.' remark an early witness to the Neoplatonic doctrine of *agnoscendo cognoscitur*.[4] According to MERLAN, from this passage "a direct line leads to Albinus who ... described the ways of knowing God, the ineffable, by either ἀφαίρεσις or analogy or ascension. (... ἀφαίρεσις) may mean either abstraction in the ordinary sense or subtraction, the former leading to the emptiest the latter to the fullest concept of being-as-such (...); the two terms analogy and ἀφαίρεσις (some kind of negation) seem to be clearly prepared in our Theophrastus passage." (188); cp.

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[1] It may be noted that even in this context τρόπος may refer to the mode of being (i.e. being things which are γνωστὰ τῷ ἄγνωστα εἶναι) as well. See *ad* 9 a 12 and 9 a 20.

[2] The use of γιγνώσκειν instead of ἐπίστασθαι is not decisive: BONITZ 155 b 38-41 s.v. γινώσκειν: "cum vv εἰδέναι, ἐπίστασθαι ita coniungitur γινώσκειν, ut proprie γινώσκειν actionem cognoscendi, εἰδέναι effectum scientiae significet, nec tamen id discrimen ubivis servetur"; see also below.

[3] Cp. REALE *ad loc.*; REALE/CATAN 418.

[4] Cp. MERLAN's rendering of αὐτῷ τῷ ἀγνώστῳ in 9 a 22 as "just by ignorance" (^{3}1975) 188.

THEILER (1958) 105: "so darf nicht nur das Tiefste, die Materie (...), sondern auch das Höchste (...) als Objekt angenommen werden.".

However, a reference to the sophistic argument seems unlikely insofar as **καθάπερ τινές φασιν** hardly suggests that the paradox was not meant to be serious.

With regard to the view of MERLAN and THEILER it should be noted that (1) even though we have ancient testimony to the idea that matter cannot be known,[1] and (2) for the ultimate principles (of being/knowledge), too, the opinion that we cannot have knowledge of them is attested,[2] (3) there is no earlier testimony to the paradoxical consequence here expressed by Th.

It seems to follow that Th. is borrowing this paradox from some source unknown to us in order to characterize the τρόπος τοῦ ἐπίστασθαι peculiar to the principles—which encounters special problems owing to their nature as limits of reality. Since the original context of the paradox is obscure, it is hard to decide whether γνωστά and ἄγνωστα should be interpreted in a modal sense or not. Fortunately in the present context, which concerns a 'manner of knowing things' that can be either actual or potential, there is little to choose between the two translations.

Th. adds that, if such a τρόπος τοῦ ἐπιστάσθαι exists, a further division is required (**διαιρέσεως δέ τινος δεῖται**): just as in the obvious case of τὰ κινητὰ

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[1] THEILER (1958) 105 refers to Plato *Tim.* 52 B 1-2 αὐτὸ δὲ [sc. 'space'] μετ' ἀναισθησίας ἁπτὸν λογισμῷ τινι νόθῳ, μόγις πιστόν and to Arist. *Met.* 1036 a 8-9 ἡ δ' ὕλη ἄγνωστος καθ' αὑτήν and, as h.l., *Phys.* 191 a 7-8 ἡ δὲ ὑποκειμένη φύσις ἐπιστητὴ κατ' ἀναλογίαν.

One might compare also Arist. *Met.* 994 b 20 ff. and Alexander *ad loc.* (162-5 Hayduck), esp. 164.16-22 τοῦ τὸ ἄπειρον ἄγνωστον εἶναι τῇ αὑτοῦ φύσει παρατίθεται σημεῖον τὴν ὕλην, ἐπεὶ δοκεῖ κατὰ τὸν αὑτῆς λόγον ἄπειρος εἶναι, ἀσχημάτιστος οὖσα κατὰ τὴν ἰδίαν φύσιν καὶ οἰκεῖον πέρας οὐκ ἔχουσα. τῷ δὴ τοιαύτην αὐτὴν εἶναι οὐδὲ ἐπιστήμην αὐτῆς ἔχομεν· κινουμένῳ γάρ τινι γιγνώσκομεν αὐτήν· δοξαστὴ γάρ ἐστι καὶ οὐκ ἐπιστητή, καὶ ὡς μὲν ὁ Πλάτων φησί, νόθῳ λογισμῷ γνωστή, ὡς δὲ Ἀριστοτέλης, ἀναλογίᾳ γνωστὴ καὶ δοξαστή, ὡς καὶ τοῦτο εἴρηκεν ἐν τοῖς Φυσικοῖς. (see also below). One migt also recall Socrates' "dream" (*Tht.* 201 D 8 ff.) about people speaking about the unaccountability of στοιχεῖα (both 'letters' and—here apparently for the first time—'elements': see CORNFORD 143 n.1 *ad loc.*): ἐγὼ γὰρ αὖ ἐδόκουν ἀκούειν τινῶν ὅτι τὰ μὲν πρῶτα οἱονπερεὶ στοιχεῖα, ἐξ ὧν ἡμεῖς τε συγκείμεθα καὶ τἆλλα, λόγον οὐκ ἔχοι. ... (202 B 5-7) οὕτω δὴ τὰ μὲν στοιχεῖα ἄλογα καὶ ἄγνωστα εἶναι, αἰσθητὰ δέ· τὰς δὲ συλλαβὰς γνωστάς τε καὶ ῥητὰς καὶ ἀληθεῖ δόξῃ δοξαστάς.

[2] Arist. *An. Post.* 100 b 10-4 τῶν ἀρχῶν ἐπιστήμη μὲν οὐκ ἂν εἴη, ἐπεὶ δ' οὐδὲν ἀληθέστερον ἐνδέχεται εἶναι ἐπιστήμης νοῦν, νοῦς ἂν εἴη τῶν ἀρχῶν, ἔκ τε τούτων σκοποῦσι ("if we inquire from these facts" BARNES) καὶ ὅτι ἀποδείξεως ἀρχὴ οὐκ ἀπόδειξις, ὥστ' οὐδ' ἐπιστήμης ἐπιστήμη. THEILER (1958) 105 refers also to Proclus *in Eucl.* 179.12 f. (= Speus. Fr. 73 Tarán) where it is argued that the ἀρχαί must differ from τὰ μετὰ τὰς ἀρχὰς "τῇ ἁπλότητι, τῷ ἀναποδείκτῳ, τῷ αὐτοπίστῳ" (see also note *ad* 9 b 13-6, pp. 456 ff.).

καὶ ὑπὸ τὴν φύσιν and τὰ μαθηματικά mentioned above, a division or specification should be made within this class.

For the genitive with δεῖται, cp. *HP* II.7.2 διακαθάρσεώς ... δεῖσθαι "need pruning"; IV.11.5 καταυλήσεως βραχείας δεῖσθαι "needs but little preliminary playing upon", tr. HORT; *CP* I.8.1 δεῖται μόνον τροφῆς "needing only to be fed", tr. EINARSON/LINK; I.8.4 προσδεῖται δυνάμεως "requires to be supplemented by power", *ibid.*[1]

For the shift from optative to indicative compare

> Plato *Gorg.* 481 C 3-4 (...), ἄλλο τι ἡμῶν ὁ βίος ἀνατετράμμενος ἂν εἴη τῶν ἀνθρώπων καὶ πάντα τὰ ἐναντία πράττομεν, ὡς ἔοικεν, ἢ ἃ δεῖ;

On the supposition that ἔνια refers to the ἀρχαί in general, Th. may have in mind a διαίρεσις into material principles on the one hand and 'the highest' principles on the other hand;[2] cp. also *sub* (1) and (2) above.

In any case, what we get is not an actual division of the hypothetical τρόπος of "γνωστὰ τῷ ἄγνωστα εἶναι" but, with some caution (for **τάχα δ'** see *ad* 4 b 16, p. 135) and a restriction (see *ad* ἐφ' ὧν ἐνδέχεται below), an alternative for the putative τρόπος of (γνωστὰ) τῷ ἄγνωστα εἶναι: perhaps, where possible, it is more appropriate to say (**λέγειν**)[3] that these objects are known by analogy (**κατ' ἀναλογίαν**).[4] This statement seems to be more appropriate (**οἰκειότερον**) since, in contrast to τῷ ἄγνωστα εἶναι, it does make explicit a genuine τρόπος τοῦ ἐπίστασθαι.

ἐφ' ὧν ἐνδέχεται testifies to a characteristic reserve on the part of the author, who is aware that what is desirable is not always feasible.[5] Compare

> *HP* I.3.1 ἐπεὶ δὲ συμβαίνει σαφεστέραν εἶναι τὴν μάθησιν διαρουμένων κατὰ εἴδη, καλῶς ἔχει τοῦτο ποιεῖν ἐφ' ὧν ἐνδέχεται.

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[1] *Contra* R-F "but needs some care to distinguish it from others"; L-M "et qui exige une certaine [place dans la] division."

[2] See pp. 282-3 above.

[3] *Contra* R-F: "to describe them"; L-M "de les expliquer". The use of the present tense stem indicates that the analogical method is brought forward as an alternative for what "some people maintain" (καθάπερ τινές φασιν 9 a 19): see *ad* εἰπεῖν 9 b 2, p. 446 below.

[4] For the aptness of γνωστά to express "accessible by analogy" cp. BONITZ s.v. γινώσκειν (indicating an "actio cognoscendi") cited above.
This would mean, I think, that Th. prefers the solution of intuitive knowledge (MERLAN's "type 1", (^{3}1975) 185) to that of *agnoscendo cognoscitur* ("type 2"). See below.

[5] Since the purport of this part of the sentence is to offer an alternative for the phrasing γνωστὰ τῷ ἄγνωστα εἶναι (see above), with ἐφ' ὧν ἐνδέχεται Th. is not making a start with a διαίρεσις of this class. In that case reference might have been to the distinction between material principles which can be known by analogy (as was suggested also by Aristotle, see above; also 8 a 11-2 and 8 a 19-20 above), and the first principle which is known by a different comparison, e.g. by 'the more and the less': cp. Th.' tentative solution in 4 b 13-4.

As we have already seen, although Th. considers the analogical method as a promising way to acquire knowledge both of the material principles[1] and of the principle of movement,[2] he is prone to add that a different kind of comparison might apply rather: see 8 a 20 and 4 b 12-3, with regard to the material principles and the first principle respectively. In the same vein ἐφ' ὧν ἐνδέχεται seems to express that Th. realizes that this specification of the method involved might not apply, or might not apply invariably.

For οἰκειότερον a comparative interpretation of **ἢ** seems to be more natural than a disjunctive one, whether strong (Lat. "aut") or weak (Lat. "vel"). This would require that **αὐτῷ τῷ ἀγνώστῳ** ("by the unknowable itself") could be a repetition of, and equivalent to τῷ ἄγνωστα εἶναι in 9 a 19[3]—which is doubtful.

In the light of the way of 'perception' of the principles which might proceed "by mind itself"[4] which is introduced in a similarly circumspect manner in 9 b 13-5 (τάχα' δ' ἐκεῖνο ἀληθέστερον ὡς αὐτῷ τῷ νῷ τῶν τοιούτων ἡ θεωρία θιγόντι καὶ οἷον ἀψαμένῳ), the interpretation of ἢ αὐτῷ τῷ ἀγνώστῳ as an equivalent to κατ' ἀναλογίαν (sc. γνωστά) seems to be more attractive: one might as well say that we (are able to) gain knowledge of these objects (sc. the principles) by what is inaccessible to our comprehension (sc. νοῦς) itself.[5] Cp. the role ascribed to διάνοια in 8 b 12-6, pp. 398, 404.

This interpretation, at any rate, makes sense of **καθάπερ ... ὁρατόν**:[6] the principles may be said to be known by the unknowable, just as if one were to

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[1] See 8 a 19-20.

[2] See 8 a 5-6, cp. 10 a 15-9 with commentary *ad locc.*

[3] So TRICOT "par leur caractère même d'inconnaissable"; "by the very fact that they are unknown" (R-F).

[4] Cp. also, in a different context, αὐτὸν ... τὸν νοῦν 7 b 22-3 above.

[5] Cp. the concept of ἀφανὴς γνώμη in the very different context of Hippocr. *Reg.* I.12: γνώμη ἀνθρώπου ἀφανὴς γινώσκουσα τὰ φανερά, which constitutes only one side of the argument to the effect that human nature imitates μαντική, which τοῖσι μὲν φανεροῖσι τὰ ἀφανέα γινώσκει, καὶ τοῖσιν ἀφανέσι τὰ φανερά.

A different conception altogether seems to be that the intellect when recieving knowledge of something unknown has something of the unknown within itself, 303.11-4 FHS&G, (= Alb. Magn. *An. Post.* 1.1.3): similiter igitur est de intellectu recipiente ignoti scientiam, quod aliquid ignoti habeat apud se. hoc autem non est nisi illud in quo ignotum est in formali potentia.

[6] See above. In view of the complexity of this passage, variant readings like these are not surprising. One can only be grateful to the copyists for resisting the temptation to write τῷ ὁρατῷ τὸ ἀόρατον, which describes the analogical method (ὄψις ἀδήλων τὰ φαινόμενα: see DILLER (1932)) to perfection; cp. e.g. *HP* I.2.3 ἀλλ' ἐπεὶ διὰ τῶν γνωριμωτέρων μεταδιώκειν δεῖ τὰ ἀγνώριστα, ... ; also Arist. *EN* 1104 a 13-4 δεῖ γὰρ ὑπὲρ τῶν ἀφανῶν τοῖς φανεροῖς

say that the visible is seen by the invisible, sc. by the soul[1] (καθάπερ εἴ τις ⟨λέγοι⟩ τῷ ἀοράτῳ ⟨ὁρατὸν εἶναι⟩ τὸ ὁρατόν).[2]

One might compare

Plato *Tim.* 36 E 5 – 37 A 2 καὶ τὸ μὲν δὴ σῶμα ὁρατὸν οὐρανοῦ γέγονεν, αὐτὴ δὲ ἀόρατος μέν, λογισμοῦ δὲ μετέχουσα καὶ ἁρμονίας ψυχή, τῶν νοητῶν ἀεί τε ὄντων ὑπὸ τοῦ ἀρίστου ἀρίστη γενομένη τῶν γεννηθέντων. Here Timaeus is speaking of the world-soul; Proclus (II.293.10) *ad loc.* states more plainly τὸ μὲν σῶμα ὁρατόν ἐστιν, ἡ δὲ ψυχὴ ἀόρατος.

Ps.-Arist. *De Mundo* 399 b 10-22 οὕτω χρὴ καὶ περὶ τοῦ σύμπαντος φρονεῖν· ὑπὸ γὰρ μιᾶς ῥοπῆς ὀτρυνομένων ἁπάντων γίνεται τὰ οἰκεῖα, καὶ ταύτης ἀοράτου καὶ ἀφανοῦς. ὅπερ οὐδαμῶς ἐστιν ἐμπόδιον οὔτε ἐκείνῃ πρὸς τὸ δρᾶν οὔτε ἡμῖν πρὸς τὸ πιστεῦσαι· καὶ γὰρ *ἡ ψυχή*, δι' ἣν ζῶμέν τε καὶ οἴκους καὶ πόλεις ἔχομεν, *ἀόρατος οὖσα* τοῖς ἔργοις αὐτῆς[3] ὁρᾶται·.... (19) ταῦτα χρὴ καὶ περὶ θεοῦ διανοεῖσθαι, δυνάμει μὲν ὄντος ἰσχυροτάτου, ..., διότι πάσῃ θνητῇ φύσει γενόμενος ἀθεώρητος ἀπ' αὐτῶν τῶν ἔργων θεωρεῖται. (That the soul, or God, *is* seen through its effects is not at issue in the present passage: see p. 339 n. 6, and below.)

What this amounts to, then, is that according to Th. the ἀρχαί are not 'known' merely by their being unknowable: the principles, too, *are* (or, *can* be) known, preferably by analogy—which proceeds by the exercise of νοῦς, the intellectual faculty which itself is beyond our understanding, just as the faculty of vision cannot itself be seen.[4]

9 a 23-4 πόσοι δ' οὖν ... διελεῖν.

δ' οὖν singles out from what precedes the question relevant now.[5] The outcome of the preceding paragraph was that the starting-point of knowledge of

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μαρτυρίοις χρῆσθαι, *DA* 413 a 11-2 ἐπεὶ δ' ἐκ τῶν ἀσαφῶν μὲν φανερωτέρων δὲ γίνεται τὸ σαφὲς καὶ κατὰ τὸν λόγον γνωριμώτερον, ... Also Ps.-Arist. *De Mundo* 399 b 12, quoted above.

Cp., however, L-M *ad loc.* (who read ἀόρατον): "La méthode épicurienne, qui consiste précisément à interpréter l'invisible par référence au visible (...), suivra la voie ici suggérée par Théophraste".

1 Cp. D.L. VIII.30 (Pythagoras): τρέφεσθαί τε τὴν ψυχὴν ἀπὸ τοῦ αἵματος· τοὺς δὲ λόγους ψυχῆς ἀνέμους εἶναι. ἀόρατόν τ' εἶναι αὐτὴν καὶ τοὺς λόγους, ἐπεὶ καὶ ὁ αἰθὴρ ἀόρατος.

2 This interpretation seems to be preferable to the more factual "just like one is able to see the visible by the invisible", since Th. is suggesting an alternative characterization of the way in which the principles might be known.

3 αὐτῆς codd., Lorimer; αὐτοῖς codd. al., Bekker: see Furley *ad loc.*

4 Cp. Arist. *Top.* 108 a 11 ὡς ὄψις ἐν ὀφθαλμῷ, νοῦς ἐν ψυχῇ; *EN* 1096 b 28-9 ὡς γὰρ ἐν σώματι ὄψις, ἐν ψυχῇ νοῦς. Also Plato *Tim.* 52 A 3-4 ἀόρατον δὲ καὶ ἄλλως ἀναίσθητον, τοῦτο ὃ δὴ νόησις εἴληχεν ἐπισκοπεῖν (see p. 82 above).

5 Cp. 4 a 17, 6 a 15.

each object (ἕκαστα) is the proper method in each case; it is not at all clear, however, how many relevant 'kinds' of objects there are, that is, on how many levels of aggregation a proper method applies. Difficulties arise from the fact that a proper method applies not only in the case of a major 'kind' of objects, like τὰ φυσικά: this more comprehensive class is again divided into sub-classes (e.g. animals, plants), each of them with a method proper to it.[1] The situation is complicated even further by the fact that at lower levels of aggregation, too, 'kinds' of entities may be distinguished which can be known by their own particular method (see also *ad* ἔστιν γάρ τι καθ' ἕκαστον γένος ἴδιον 9 a 15-6). This raises the question *how many* kinds with their peculiar methods, and thus how many ways of knowing things there are.[2]

In **πόσοι ... τρόποι ... πειρατέον διελεῖν**, while the choice of the verb διαιρεῖν indicates that the point is how to complete a division as pictured in outline above (cp. 9 a 18 διῄρηται δ' ἱκανῶς with regard to the only clear-cut division that exists), the use of the aorist seems to emphasize that the question is how, given that knowing is in various ways, this διαίρεσις can be realized successfully.[3] Again it is difficult to say whether the τρόποι ('modes') to be identified concern knowledge or being,[4] and in view of the parallelism between the two we should not try to be more specific than the Greek.[5]

The addition of **καὶ ποσαχῶς τὸ εἰδέναι** makes explicit what was implied by what went before, viz. that, since acquiring knowledge of something depends on the method to be used in each case, the question how many kinds of 'knowing' may be distinguished depends on how many different kinds of being with a proper method there are.

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[1] Only in the case of (the objects of) mathematics this sub-division is evident and well-defined: see 9 a 16-8.

[2] Barthelomew deletes both this and the following sentence, "offenbar [?] nicht wegen einer Verderbnis, sondern weil seine Vorlage hier Spuren eines Redactors aufwies. Diese scheint hier besser zu sein als unsere Hss. Dass Theophrast plötzlich die verschiedenen Arten des Wissens untersuchen will, ist ein Fremdkörper in dem Zusammenhang, der davon handelt: πῶς ἕκαστα μεταδιωκτέον." Kley (1936) 24-5 *ad loc.*

Kley submits that 9 a 23 πόσοι δ' οὖν – 9 a 26 τὸ ἐπίστασθαι belongs to the passage 8 b 24 (ὅλως δὲ τὸ ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν, which he conceives as a *definition* of τὸ ἐπίστασθαι (but see commentary *ad loc.*) to 9 a 9 τὰ δὲ διὰ τἄμφω: he does not, however, go on to tell us where it should be placed.

Th.' proceeding h.l. from more specific to more fundamental questions did not fail to puzzle other interpreters, too: see *ad* 9 b 1-4, p. 445 below.

[3] See *ad* ἀφορίσαι 4 a 2.

[4] Cp. *ad* 9 a 12, pp. 430-1.

[5] *Contra* L-M: "La construction est *apo koinou*: les modes sont les modes du connaître (τρόποι *sc.* τοῦ εἰδέναι)." (*ad loc.*).

Although the use of εἰδέναι instead of ἐπίστασθαι (9 a 10, 26) may be for the sake of *variatio*, εἰδέναι h.l. may have been chosen as the less technical term (connoting personal experience rather than scientific theory);[1] compare

Od. 8 δεῖ δ' εἰδέναι ποῖαι ποίοις εὔμικτοι καὶ ποῖαι ποίοις συνεργοῦσιν εἰς τὸ ποιεῖν μίαν ὥσπερ ἐπὶ τῶν χυμῶν.
38 τούτων δὲ τὸ μὲν τῶν ἐτῶν οὐκ ἐφ' ἡμῖν, πλὴν εἰς τὸ εἰδέναι τὰ ποῖα σφοδροτέρας καὶ ἀσθενεστέρας ἔχει τὰς δυνάμεις· ...
Sens. 86 ἐν οἷς δὲ λόγοις, οὐδ' εἴ τις εἰδείη χρῆναι λέγειν φησίν (sc. Plato), ὧν οὐκ ἔχομεν εἰκότα λόγον ἢ ἀναγκαῖον· ("But as for the precise proportions, he says that one ought not to state them, even if one knew, since we have neither a necessary nor a probable account to give of them" tr. STRATTON). See also 133 FHS&G, quoted *ad* 9 a 10-1, p. 429.

9 a 24-6 ἡ δ' ἀρχὴ ... τὸ ἐπίστασθαι.

For **ἡ δ' ἀρχή** see *ad* ἀρχὴ δέ 4 a 9. The plural of **πρὸς αὐτὰ ταῦτα** somewhat loosely refers to the complex question pointed out in what precedes.

The starting-point for a complete division of kinds of entities with a method peculiar to them, which would yield the sum-total of ways in which 'knowing' applies, is to give a definition of 'knowing'. With a definition as the criterion we would be able to say what is included in knowing and what is not, so that we could hope to give a complete summing up of kinds of knowing. That **ἀφορίσαι** here refers to a qualitative definition in particular may be inferred from the sequel (οὐ γὰρ οἷόν τε καθόλου καὶ κοινόν τι λαβεῖν ἐν τοῖς πλεοναχῶς λεγομένοις, 9 a 27 – b 1).[2] The aorist stem here again seems to express that the crucial issue is to give a satisfactory definition.[3]

For the addition **καὶ πρῶτον** cp. BONITZ 652 b 35-8 s.v.: "πρῶτος ubi absolute usurpatur conferri potest cum notione et vario usu nominis ἀρχή. ἥ τε ἀρχὴ πρῶτον καὶ τὸ πρῶτον ἀρχή [*Top.* 121 b 9]".[4] H.l. πρῶτον seems to repeat ἀρχή from the perspective of the person who is to perform this task.[5]

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[1] Cp. BONITZ 217 b 20-2 s.v. "εἰδέναι eadem vi usurpatur atque ἐπίστασθαι, ita quidem ut videatur εἰδέναι magis receptum ex vulgari sermone, ἐπίστασθαι ipsum artis vocabulum esse."
[2] See note *ad* 4 a 2. Cp., however, commentary *ad* 9 b 1 (ἢ καὶ κ.τ.λ.).
[3] See also χαλεπώτερον δ' κ.τ.λ. below with commentary.
[4] Cp. 9 a 11 ἀρχὴ καὶ μέγιστον ὁ οἰκεῖος τρόπος.
[5] R-F: "the first thing to be done".

9 a 26 – b 1 **χαλεπώτερον δ' ... λεγομένοις.**

The definition of 'knowing' which is required for determining the sum-total of kinds of knowing, however, is rather difficult to give (**χαλεπώτερον δ' ἂν δόξειεν**): if knowledge is "knowledge of something peculiar to some particular thing",[1] no generalization (and thus no definition) is possible: τοῦ γὰρ καθόλου καὶ τοῦ εἴδους ὁ ὁρισμός (Arist. *Met.* 1036 a 30).[2] As **οὐ γὰρ οἷόν τε ... λαβεῖν** indicates, χαλεπώτερον δ' ἂν δόξειεν involves an understatement. (For λαμβάνειν, see *ad* 4 b 14 above; for the aorist, see *ad* ἀφορίσαι above.)

The addition **καὶ κοινόν τι** adds to the more technical **καθόλου** a more practical perspective. The plural of ἐν τοῖς **πλεοναχῶς λεγομένοις** is accounted for by the general nature of the statement; in the context both being and knowing are obvious references.[3]

The point seems to be that since knowing differs according to the object of knowledge involved, knowing cannot be defined, since the use of the term is essentially connected with its particular reference in each case. This means that the sum-total of kinds of knowing cannot be determined, even apart from the complication that the number of things known by means of their proper method depends on how many particular fields of investigation are recognized (e.g. plants, trees, evergreen trees, and any other level of aggregation which one might want to investigate; see 9 a 10-23). The conclusion must be that there are as many kinds of knowledge as there are kinds of being worth investigation.

VIII.4 (9 b 1-16): *Since there is no delimitation of knowledge independently from a delimitation of being, it is also difficult to say how far we should go on in our quest for causes, in the case of the objects of sense and of thought alike. That there* is *a limit is inherent in the nature of these objects themselves, as well as being a necessary condition for our understanding.*

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[1] See 8 b 20-4.

[2] Cp. Leszl (1970) 41 (referring to Arist. *Met.* 1006 a 32 ff.): "Of importance is the consideration that if a word has more than one meaning, i.e. designates more than one essence, more than one definition will be attached to it, in correspondence to each of these meanings."

[3] In view of this, there is no ground for Kley's objection that "doch wohl kaum unter dem Plural τὰ πλεοναχῶς λεγόμενα das Wissen verstanden werden (kann)" (1936) 25; as said above, Kley submits that the present sentence belongs after τὸ ὁρατόν at 9 a 23 (see note *ad loc.*).

Although there is no clarity about the end of our search for causes, the objects of sense and the objects of thought do provide a starting-point (or, for practical purposes the objects of sense at least do so). In our quest for causes we are unable to proceed to the first things—either because there is no cause, or because of a deficiency on our part (in which case there could be one more cause at least).
But perhaps it is more in accordance with reality to say that we grasp the extreme constituents of reality by means of the intellect itself (so that, while they may be unknown, once they are known there is no deception about them).

9 b 1-4 ᾗ καὶ τοῦτ' ... νοητοῖς·

ᾗ R-F; ἢ MSS.; ἔστι δὲ coni. USENER (1861) 271.

Ross' correction seems to be necessary: (1) ἢ at the beginning of a sentence without a corresponding disjunctive (a πότερον preceding, or another ἤ) seems to be idiomatic only in questions; (2) the corrective use is ruled out by the following καὶ τοῦτο; and (3) ἦ is not used in continuous prose. For ᾗ cp. 10 b 26 ᾗ καὶ ἔοικεν ὁ λόγος ἔχειν τι πιστόν (ᾗ A[ld]) and 11 b 7, where Ross likewise reads ᾗ καί for MSS. ἢ καί. A similar situation is found in

> *CP* V.6.13 συμβαίνει δὲ καὶ ἐν ἄλλοις, μορίων τινῶν ἀφαιρουμένων, ποιεῖν τινα διαφοράν, ὥσπερ τὰς ἀμπέλους, ὅταν ἡ μήτρα τοῦ κλήματος ξυσθῇ, τοὺς βότρυς ἀγιγάρτους·[1] *ᾗ*[2] *καὶ* πίστιν ταῦτα παράσχοιτ' ἂν ἴσως τοῖς ἀφ' ἑκάστου τῶν μερῶν λέγουσιν ἀπιέναι σπέρμα· λύσις δ' ἥπερ εἴρηται καὶ ἐπὶ τῶν ζῴων.
>
> VI.9.1 (...) καὶ πάλιν τὰ ὀσμώδη, διαμασωμένοις καὶ γευομένοις, χυλόν (sc. ἔχει), σύνεγγυς τῶν αἰσθήσεων κειμένων, ἀλλὰ τρόπον τινὰ καὶ τῶν αἰσθητῶν. *ᾗ*[3] *καὶ* οὐ κακῶς ἂν δόξειε λέγεσθαι τὸ κατὰ τοὺς χυλοὺς τελεῖν τὰς ὀσμάς· αὕτη γὰρ εἰς ἐκείνην φέρει τὴν δόξαν, ὡς ἐχόντων τινὰ συγγένειαν καὶ ἀπὸ ταὐτοῦ πως γινομένων.
>
> VI.13.5 ἄλλη δὲ πρὸς ἄλλην δύναμιν οἰκεία χώρα, καθάπερ ἐπὶ τῶν καρπῶν· ἔνιαι γὰρ οὐδὲ ἐκπέττουσιν ὅλως τὰς φαρμακώδεις δυνάμεις· ἐπὶ πολλαχοῦ καὶ μέλας ἐλλέβορός ἐστι καὶ ἄλλαι τῶν ῥιζῶν, ἀλλ' ἀμβλεῖαι κἀδύνατοί τινες. *ᾗ*[4] *καὶ* δόξειεν ἂν ψυχροῦ τινος ἀέρος ἅμα καὶ εὔπνου δεῖσθαι, καὶ ἔτι τροφῆς συμμέτρου· ...

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[1] "so the vine when the core of the twig is scraped away produces clusters with no stones", tr. EINARSON/LINK.
[2] ἡ U[ac]; ἥ U[c] N; εἶναι aP (EINARSON/LINK *app. crit.*).
[3] ᾗ aP; ἡ U; ἦ u N (EINARSON/LINK *app. crit.*); cp. also *CP* I.7.1, *ad* 10 b 19-20 (p. 519).
[4] ᾗ aP; ἡ U; ἦ u N (EINARSON/LINK *app. crit.*).

VI.17.10 τάχα δὲ καὶ ἡμῖν οὐκ ἔνδηλον ἐκ τῶν ζῴων τὸ εὔοσμον διὰ τὸ χειρίστην εἶναι τὴν ὄσφρησιν· ἐπεὶ τά γ' ἄλλα καὶ πόρρωθεν αἰσθάνεται καὶ τὰ σύνεγγυς ἀκριβέστερον. *ᾗ*[1] *καὶ* τὰ μὲν ἴσως αὐτοῖς εὐώδη, τὰ δὲ καὶ ἀηδῆ πάντα φαίνεται, καθάπερ καὶ ἡμῖν ἑτέρων ἕτερα μᾶλλον, ἔνια δὲ καὶ ὅλως φεύγομεν.

For ᾗ καί ('which is also how'; "wherefore" LSJ II.2 s.v.) as a looser equivalent of διὸ καί, adding what can be understood along the lines of the preceding, compare e.g.

Thuc. II.2.3 προϊδόντες γὰρ οἱ Θηβαῖοι ὅτι ἔσοιτο ὁ πόλεμος ἐβούλοντο τὴν Πλάταιαν αἰεὶ σφίσι διάφορον οὖσαν ἔτι ἐν εἰρήνῃ τε καὶ τοῦ πολέμου μήπω φανεροῦ καθεστῶτος προκαταλαβεῖν. *ᾗ καὶ* ῥᾷον ἔλαθον ἐσελθόντες, φυλακῆς οὐ προκαθεστηκυίας.

Arist. *GC* 314 b 26 ὥστ' εἰ μὴ δυνατὸν ἐκ πυρὸς γίνεσθαι ὕδωρ μηδ' ὕδατος γῆν, οὐδ' ἐκ λευκοῦ μέλαν ἔσται οὐδὲν οὐδ' ἐκ μαλακοῦ σκληρόν (ὁ δ' αὐτὸς λόγος καὶ περὶ τῶν ἄλλων), τοῦτο δ' ἦν ἀλλοίωσις. *ᾗ καὶ* φανερὸν ὅτι μίαν ἀεὶ τοῖς ἐναντίοις ὑποθετέον ὕλην, ...

Sens. 64 ἔτι δ' αὐτοὺς μεταβάλλειν τῇ κρήσει κατὰ τὰ πάθη καὶ τὰς ἡλικίας· ᾗ καὶ φανερὸν ὡς ἡ διάθεσις αἰτία τῆς φαντασίας.

Although syntactically there is a close connection with what precedes, Th. is using this juncture to introduce a different point to be understood in the light of the absence of an ἀφορισμός of knowing: since there is no delimitation of knowledge without a delimitation of being, it is not surprising that it is hard to tell how far we should go in our quest for causes. The connection is more obvious in Greek, where ἀφορίζειν is "to delimit" as well as "to define".[2]

This passage, then, concerns the limits of being and knowledge, and thus knowledge of causes, and does not call for a discussion whether Th. did or did not accept the statement 'knowledge is knowledge of causes'[3] (*contra* R-F xxi-ii; REALE, L-M *ad loc.*).

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[1] Gaza (*unde*), Moreliana; ἡ U (EINARSON/LINK *app. crit.*).

[2] Cp. L-M *ad loc.*: "La difficulté de définir le savoir entraîne ... celle de déterminer, qu'il s'agisse des intelligibles ou des sensibles, l'extension qu'il convient de donner à l'explication par les causes."

This connection was not recognized by Barthelomey (followed by KLEY), who deletes 9 a 23 πόσοι δ'–26 τὸ ἐπίστασθαι: see commentary *ad* 9 a 23-5 and 9 a 24-6.

USENER in his edition (1890) assumes that something is missing here, and reads λεγομένοις, η ***. "hiatum indicavi, quo certum est (cf. u. 3 ζητητέον αἰτίας) definitionem scientiae haustam esse cf. Arist. met. A 3 [= 983 a 25] φανερὸν ὅτι τῶν ἐξ ἀρχῆς αἰτίων δεῖ λαβεῖν ἐπιστήμην· τότε γὰρ εἰδέναι φαμὲν ἕκαστον ὅταν τὴν πρώτην αἰτίαν οἰώμεθα γνωρίζειν (...). fortasse coeperat scriptor ἡ[γούμεθ' οὖν ἐπίστασθαι κτλ." (*ad loc.*).

[3] The answer is, as is generally recognized, that he did not: see esp. σχεδὸν δὲ καὶ ἐπιστήμη πᾶσα τῶν ἰδίων κ.τ.λ., 8 b 20-4. Also when knowledge is of causes, it is always knowledge of some particular cause of some particular entity; see also 9 a 18-21.

While **ἄπορον** suggests that the situation as such is problematic, **ἢ οὐ ῥᾴδιόν γε εἰπεῖν** conveys that, even if insight with regard to this is possible, it is not easy to express it. Cp. Plato *Tim.* 28 C 3-5 τὸν μὲν οὖν ποιητὴν καὶ πατέρα τοῦδε τοῦ παντὸς εὑρεῖν τε ἔργον καὶ εὑρόντα εἰς πάντας ἀδύνατον λέγειν· ...[1] This possibility, that the problem is not so much to know where to stop as to *put it into words*, corresponds to the possibility of an immediate contact with the ultimate principles; hence the use of the aorist infinitive.[2] See also τάχα δ' ἐκεῖνο ἀληθέστερον κ.τ.λ. in 9 b 13-6 below.[3] γε, then, presents οὐ ῥᾴδιον εἰπεῖν as what remains if ἄπορον does not apply.

τίνων probably depends on αἰτίας[4] rather than on μέχρι; in any case, while **μέχρι πόσου** views the process of searching for causes from the perspective of the investigator (i.e., how far the route of investigation extends: see *ad* εἰς τὸ ἄπειρον ὁδός 9 b 4), τίνων (... αἰτίας) has regard to the objects themselves. τίνων ... αἰτίας has distributive reference: the question is for which entity, in a particular field of investigation, it makes sense to search for a cause. The following **ἔν τε τοῖς αἰσθητοῖς καὶ νοητοῖς** presents the two main kinds of entities to which this question applies; it applies in both cases alike (**ὁμοίως**: see also ἐν ἀμφοῖν, 9 b 5).

With **αἰτίας** Th. here chooses for the term which connotes function and (thus) connection (see also δι' αἰτίου θεωρεῖν, 9 b 8-9), which is convenient where the function of entities as an ἀρχή in the sense of 'starting-point' is at issue (9 a 25, 9 b 6, 8, 9).

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[1] I owe this interpretation to Professor J.C.M. van Winden.

[2] The choice between λέγειν and εἰπεῖν represents a lexical distinction: 'to make a statement' vs. 'to speak the words': see SICKING (1991) 33. Contrast the use of the present tense stem in Plato *Tim.* 28 C above (where the impossiblity to communicate this insight to all people is concerned: εἰς πάντας ... λέγειν).
Cp. also the difference between τάχα δ' ἀληθέστερον εἰπεῖν in 8 b 12 and τάχα δ' οἰκειότερον ... λέγειν in 9 a 21-2.

[3] One may compare Proclus *In Tim.* 92 E (*ad* 28 C), I.303.3-23 D. τάχα δὲ καὶ τοῦτο λέγοι ἂν ..., ὅτι τὸν εὑρόντα λέγειν ὡς εἶδε πρός τινας ἀδύνατον· οὐδὲ γὰρ ἡ εὕρεσις λεγούσης τι τῆς ψυχῆς ἦν, ἀλλὰ μυούσης καὶ ὑπεστρωμένης πρὸς τὸ θεῖον φῶς, οὐδὲ κινουμένης οἰκείαν κίνησιν, ἀλλὰ σιωπώσης τὴν οἷον σιωπήν· ὅπου γὰρ οὐδὲ τὴν τῶν ἄλλων πραγμάτων οὐσίαν πέφυκεν ἢ δι' ὀνόματος αἱρεῖν ἢ δι' ὁριστικῆς ἀποδόσεως ἢ δι' ἐπιστήμης, ἀλλὰ διὰ νοήσεως μόνης, ὥς φησιν ἔν ταῖς Ἐπιστολαῖς αὐτός, πῶς ἂν τὴν οὐσίαν τοῦ δημιουργοῦ δύναιτο τρόπον ἕτερον εὑρεῖν ἢ νοερῶς; πῶς δ' ἂν οὕτως εὑροῦσα δύναιτο δι' ὀνομάτων καὶ ῥημάτων ἐξαγγεῖλαι τὸ ὀφθὲν καὶ εἰς ἄλλους ἐξενεγκεῖν; ἡ γὰρ ἐν συνθέσει φερομένη διέξοδος ἀδυνατεῖ τὴν ἑνοειδῆ καὶ ἁπλῆν παριστάνειν φύσιν.
τί οὖν; φαίη τις ἄν· οὐχὶ πολλὰ καὶ περὶ τοῦ δημιουργοῦ καὶ περὶ τῶν ἄλλων θεῶν καὶ ὑπὲρ τοῦ ἑνὸς αὐτοῦ λέγομεν; ἢ περὶ αὐτῶν μὲν λέγομεν, αὐτὸ δὲ ἕκαστον οὐ λέγομεν, καὶ ἐπιστημονικῶς μὲν δυνάμεθα λέγειν, νοερῶς δὲ οὔ· τοῦτο γάρ ἐστι τὸ εὑρεῖν, ὥσπερ εἴπομεν πρότερον. εἰ δὲ ἡ εὕρεσις σιωπώσης ἐστὶ ψυχῆς, πῶς ἂν ἀρκέσειε τὸ εὑρεθὲν οἷόν ἐστιν ὁ διὰ τοῦ στόματος ῥέων λόγος εἰς φῶς ἐξενεγκεῖν;

[4] For similarly compendious phrasing cp. 5 a 15 περὶ τῆς ἐφέσεως, ποία καὶ τίνων.

9 b 4-5 ἢ γὰρ ... φρονεῖν.

To ask where one should end the search for causes is a pertinent question in the case both of perceptible and of noetic objects, since (**γάρ**) the alternative of infinite regress (**ἢ ... εἰς τὸ ἄπειρον ὁδός**) is to be rejected in both cases. Different kinds of an infinite regress are distinguished by Aristotle in

> Arist. *Met.* α 994 b 20-31 ἔτι τὸ ἐπίστασθαι ἀναιροῦσιν οἱ οὕτως λέγοντες (sc. οἱ τὸ ἄπειρον ποιοῦντες), οὐ γὰρ οἷόν τε εἰδέναι πρὶν ἢ εἰς τὰ ἄτομα ἐλθεῖν· καὶ τὸ γιγνώσκειν οὐκ ἔστιν, τὰ γὰρ οὕτως[1] ἄπειρα πῶς ἐνδέχεται νοεῖν; οὐ γὰρ ὅμοιον ἐπὶ τῆς γραμμῆς, ἣ *κατὰ τὰς διαιρέσεις* μὲν οὐχ ἵσταται, νοῆσαι δ' οὐκ ἔστι μὴ στήσαντα (...), ἀλλὰ καὶ τὴν ὕλην ἐν κινουμένῳ νοεῖν ἀνάγκη· καὶ ἀπείρῳ οὐδενὶ ἔστιν εἶναι (sc. actually)· εἰ δὲ μή, οὐκ ἄπειρόν γ' ἐστὶ τὸ ἀπείρῳ εἶναι.—ἀλλὰ μὴν καὶ εἰ ἄπειρά γ' ἦσαν *πλήθει* τὰ εἴδη τῶν αἰτίων, οὐκ ἂν ἦν οὐδ' οὕτω τὸ γιγνώσκειν· τότε γὰρ εἰδέναι οἰόμεθα ὅταν τὰ αἴτια γνωρίσωμεν· τὸ δ' ἄπειρον κατὰ τὴν πρόσθεσιν οὐκ ἔστιν ἐν πεπερασμένῳ διεξελθεῖν.

Here the metaphor covers both an ontological journey or 'route' (of which use Heraclitus' ὁδὸς ἄνω κάτω may be an early example), i.e. an infinite regress in reality, and an epistemological 'route' pursued by the investigator, which is the more common application of the metaphor from Parmenides' ὁδοὶ ... διζήσιος onwards;[2] e.g.

> Arist. *EN* 1095 a 32 – b 1 εὖ γὰρ ὁ Πλάτων ἠπόρει τοῦτο καὶ ἐζήτει πότερον ἀπὸ τῶν ἀρχῶν ἢ ἐπὶ τὰς ἀρχάς ἐστιν ἡ ὁδός, ὥσπερ ἐν τῷ σταδίῳ ἀπὸ τῶν ἀθλοθετῶν ἐπὶ τὸ πέρας ἢ ἀνάπαλιν. See also *Phys.* I.1, 184 a 17 quoted *ad* 9 b 6-8.

εἰς τὸ ἄπειρον here with the article, cp. Arist. *DA* 411 b 13-4 (οὕτω ...) πρόεισιν ἐπὶ τὸ ἄπειρον.[3] More often, it seems, without the article, as in (καὶ τοῦτ') εἰς ἄπειρον πρόεισιν, e.g. Arist. *Met.* 1060 a 36, *Phys.* 209 a 25.

The infinite regress is **ἀλλότριος**, i.e. "foreign", sc. to the nature of these classes of entities; cp. *HP* I.1.3 ἀλλότρια τῆς φύσεως (of animals).[4] The inappropriateness of an infinite regress does not seem to concern the search for

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[1] I.e. "actually" Ross *ad loc.*

[2] Parm. B 2.2 DK. "[Parmenides'] 'ways of seeking' are ... 'ways of seeking for reality'. Since he admits only one such way as authentic, he identifies the reality sought for with the Being discovered by pursuing this way.", Coxon 173 *ad loc.* Cp. μεταβαίνωμεν 9 b 10-1

[3] As far as I see there is no obvious difference between εἰς ἄπειρον and ἐπ' ἄπειρον: see εἰς ἄπειρον ἰέναι *Met.* 994 a 3, 20 (*v.l.* ἐπ' in both cases), b 4.

[4] ἀλλότριος is opposed to οἰκεῖος in e.g. *Od.* 13 (τὰ μὲν γὰρ ἐκφαίνει τὸ οἰκεῖον τὰ δὲ προσλαμβάνει τὸ ἀλλότριον "for under such treatment [when broken up, bruised, crushed] roots give forth the property which belongs to them, but flowers acquire a property which is not their own", tr. Hort), cp. *CP* II.5.4 τὸ μὴ ἐξάγειν τὸ ἀλλότριον, ἀλλὰ τὸ οἰκεῖον.

causes (in which it would be plainly paradoxical if no beginning to a series of ἀρχαί/αἰτίαι could be identified); in view of ἐν ἀμφοῖν especially, it seems that the absence of some definite first cause is considered to be at variance with the nature of both provinces themselves.[1] This assertion is not explained here, but (1) in the case of τὰ αἰσθητά the idea may be that where there is definiteness in the entities themselves it would be surprising if there were no definite principles: cp. 7 a 10-9 above. One might compare Th.' reported effort to point out that there *are* ἀρχαί of the things of nature:[2]

> 144B 4-7 FHS&G (= Simpl. *In Phys.* 184 a 10-6) ὁ μέντοι Θεόφραστος ἐν ἀρχῇ τῶν ἑαυτοῦ Φυσικῶν καὶ ταύτην ἀπέδειξε λέγων, "τὸ μέντοι τῶν φυσικῶν ἀρχὰς εἶναι δῆλον ἐκ τοῦ τὰ μὲν φυσικὰ σώματα εἶναι σύνθετα, πᾶν δὲ σύνθετον ἀρχὰς ἔχειν τὰ ἐξ ὧν σύγκειται· ἅπαν γὰρ τὸ φύσει ἢ σῶμά ἐστιν ἢ ἔχει γε σῶμα· ἄμφω δὲ σύνθετα."

and (2), in the case of τὰ νοητά an infinite regress would be even more obviously at variance with the definite nature of these entities: cp. the presupposition of 4 a 5 ff. ἡ δὲ τῶν πρώτων (sc. θεωρία) ὡρισμένη καὶ ἀεὶ κατὰ ταὐτά· διὸ δὴ καὶ ἐν νοητοῖς, οὐκ αἰσθητοῖς αὐτὴν τιθέασιν with commentary *ad loc.* and Arist. *Met.* 994 b 20 ff. quoted above.

Just as an infinite regress is at variance with the nature of both the sensible and the intelligible objects, the question where to stop is pertinent from the point of view of the investigator as well, since an infinite regress destroys our understanding (**ἀναιροῦσα τὸ φρονεῖν**).
For the use of ἀναιρεῖν cp. Arist. *Met.* α 994 b 20 ff., above; also

> Arist. *Met.* 1063 b 10-1 οὕτω γὰρ πᾶς λόγος καὶ πᾶσα ἀπόδειξις γίγνεται· μηθὲν γὰρ τιθέντες ἀναιροῦσι τὸ διαλέγεσθαι καὶ ὅλως λόγον ...

For the idea, see 9 b 21-2 below; also

> 159.1-8 FHS&G (= Proclus *In Tim.* 35 A) οὐκ ὀρθῶς ἀρχὴν ἀρχῆς ἐπιζητεῖ καὶ γένεσιν ἀγενήτου πράγματος· εἰ γὰρ καὶ τῶν πρώτων τὰ αἴτια ζητήσομεν καὶ τῶν αὐθυποστάτων γενέσεις ἐπινοήσομεν, εἰς ἄπειρον προϊόντες λησόμεθα καὶ τέλος οὐδὲν ἔχον τῆς θεωρίας· ὥσπερ γὰρ ὁ πάντα ἀποδεικτὰ νενομικὼς αὐτὴν μάλιστα τὴν ἀπόδειξιν *ἀναιρεῖ*, τοῦτον τὸν τρόπον καὶ ὁ πάντων αἰτίας ἐπιζητῶν ἄρδην *ἀνατρέπει* τὰ ὄντα πάντα καὶ τὴν τάξιν αὐτῶν τὴν ἀπό τινος ὡρισμένης ἀρχῆς προϊοῦσαν. ... (12 ff. ἡδέως δ' ἂν ἐροίμεθα τὸν Θεόφραστον πρότερον αὐτόν, πότερον οὐδενὸς αἰτίαν ἀποδοτέον ἤ τινος· εἰ γὰρ μηδενός, πρὸς τῷ τὴν ἐπιστήμην *ἀναιρεῖν*, τὴν μά-

[1] *Contra* L-M: "C'est que la démarche à l'infini est dans les deux cas étrangère à la pensée et la supprime."
[2] "was Aristoteles stillschweigend vorausgesetzt hatte", Steinmetz (1964) 150.

λιστα τὰς αἰτίας γνωρίζουσαν, καὶ ἑαυτοῦ κατηγορήσει ζητοῦντος, πόθεν μὲν αἱ βρονταί, πόθεν δὲ ἄνεμοι, ποῖαι δὲ αἰτίαι κεραυνῶν, κ.τ.λ.)

158.4-9 FHS&G (= Iulianus *Or.* 8(5).3 162B): (Xenarchus said that Th. did not take into account what he himself had said.) ὥσπερ γὰρ εἰς τὴν ἀσώματον οὐσίαν ἐλθὼν καὶ νοητήν, ἔστη μὴ πολυπραγμονῶν τὴν αἰτίαν, ἀλλὰ φὰς οὕτω ταῦτα πεφυκέναι· χρῆν δὲ δήπουθεν καὶ ἐπὶ τοῦ πέμπτου σώματος τὸ πεφυκέναι ταύτῃ λαμβάνοντα μηκέτι ζητεῖν τὰς αἰτίας, ἵστασθαι δὲ μετ' αὐτῶν καὶ μὴ πρὸς τὸ νοητὸν ἐκπίπτειν ὃν μὲν οὐθὲν φύσει καθ' ἑαυτό, ἔχον δὲ ἄλλως κενὴν ὑπόνοιαν.

Arist. *Met.* 1006 a 6-9 ἔστι (...) ἀπαιδευσία τὸ μὴ γιγνώσκειν τίνων δεῖ ζητεῖν ἀπόδειξιν καὶ τίνων οὐ δεῖ· ὅλως μὲν γὰρ ἀπάντων ἀδύνατον ἀπόδειξιν εἶναι (εἰς ἄπειρον γὰρ ἂν βαδίζοι, ὥστε μηδ' οὕτως εἶναι ἀπόδειξιν), ...

φρονεῖν is "to think", "to have understanding" as a faculty or activity of the soul; see e.g. *Sens.* 4 τὸ γὰρ αἰσθάνεσθαι καὶ τὸ φρονεῖν ὡς ταὐτὸ λέγει (sc. Parmenides); 12 Ἐμπεδοκλῆς μὲν οὖν οὕτως οἴεται καὶ τὴν αἴσθησιν γίνεσθαι καὶ τὸ φρονεῖν, ... 39 Διογένης δ' ὥσπερ τὸ ζῆν καὶ τὸ φρονεῖν τῷ ἀέρι καὶ τὰς αἰσθήσεις ἀνάπτει· ... . 44 τὰ δὲ φυτὰ διὰ τὸ μὴ εἶναι κοῖλα μηδὲ ἀναδέχεσθαι τὸν ἀέρα παντελῶς ἀφῃρῆσθαι τὸ φρονεῖν (the view of Diogenes); 47 οὐ γὰρ ἐν ἅπασι τοῖς μέρεσιν ὁ νοῦς, οἷον ἐν τοῖς σκέλεσι καὶ τοῖς ποσίν, ἀλλὰ ἐν ὡρισμένοις, δι' ὧν καὶ οἱ ἐν ἡλικίᾳ καὶ μέμνηνται καὶ φρονοῦσιν. Cp. also *ad* 6 a 19.

The idea seems to be that an infinite chain of causation would destroy our power of apprehension,[1] presumably because thinking presupposes some order on the part of the objects, which in its turn requires some ultimate point of reference: cp. 159.5-8 FHS&G quoted above.

9 b 6-8 ἀρχαὶ δὲ ... ἀρχή.

By making use of the different applications of ἀρχή Th. gives the argument a more positive twist, by adding (**δέ**) that, although certainty with regard to the ultimate limits of being and thought is problematic, both the objects of sense and the objects of thought (ἄμφω, sc. τὰ αἰσθητά and τὰ νοητά) are 'begin-

[1] Rather than our power of judgement, if the putative distinction between φρονεῖν and νοεῖν as 'practical' and 'speculative' thinking respectively is accepted; see e.g. Arist. *DA* 427 a 17 ff. ἐπεὶ δὲ δύο διαφοραῖς ὁρίζονται μάλιστα τὴν ψυχήν, κινήσει τε τῇ κατὰ τόπον καὶ τῷ νοεῖν καὶ φρονεῖν καὶ αἰσθάνεσθαι, δοκεῖ δὲ καὶ τὸ νοεῖν καὶ τὸ φρονεῖν ὥσπερ αἰσθάνεσθαί τι εἶναι (ἐν ἀμφοτέροις γὰρ τούτοις κρίνει τι ἡ ψυχὴ καὶ γνωρίζει τῶν ὄντων) καὶ οἵ γε ἀρχαῖοι τὸ φρονεῖν καὶ τὸ αἰσθάνεσθαι ταὐτὸν εἶναί φασιν, ... (427 b 6 ff.) ὅτι μὲν οὖν ταὐτόν ἐστι τὸ αἰσθάνεσθαι καὶ τὸ φρονεῖν, φανερόν. τοῦ μὲν γὰρ πᾶσι μέτεστι, τοῦ δὲ ὀλίγοις τῶν ζῴων. ἀλλ' οὐδὲ τὸ νοεῖν, ἐν ᾧ ἐστὶ τὸ ὀρθῶς καὶ τὸ μὴ ὀρθῶς, τὸ μὲν ὀρθῶς φρόνησις καὶ ἐπιστήμη καὶ δόξα ἀληθής, τὸ δὲ μὴ ὀρθῶς τἀναντία τούτων—οὐδὲ τοῦτό ἐστι ταὐτὸ τῷ αἰσθάνεσθαι· κ.τ.λ.

nings' (i.e. points of departure, starting-points: **ἀρχαί**,[1] see p. 446 above). Here again, **τρόπον τινά** indicates that more can be said about *how* these provinces are ἀρχαί (cp. *ad* 5 a 16, τρόπον τινὰ ὑπεναντίαι)—which will be done in the following.

τάχα δ' introduces a speculation on *how* τὰ αἰσθητά and τὰ νοητά might be ἀρχαί. The adverb does not so much convey that this specification is uncertain (see ἢ τὸ μὲν τέλος, ... ἀρχή below), as that specifying their status as ἀρχαί is not our main concern here, as long as we have a definite point of departure in the objects of sense (cp. *ad* μὲν οὖν 9 b 8).

According to Th., then, the distinction might be either between a starting-point for us (**ἡμῖν**) and a starting-point absolutely (**ἁπλῶς**), sc. in the case of τὰ αἴσθητά and τὰ νοητά respectively; or, alternatively (**ἤ**),[2] between the end on the one hand (**τὸ μὲν τέλος**),[3] and the other one (**ἡ δέ**) our starting-point (**ἡμετέρα τις ἀρχή**), sc. referring to τὰ νοητά and τὰ αἰσθητά respectively. The chiasmus is apparently due to the fact that the second pair of alternatives is suggested by the latter member of the first one: what has been referred to there as "the starting-point absolutely" might be conceived as τὸ τέλος just as well—which would leave 'our starting-point' as the only ἀρχή (beginning, starting-point) in a strict sense.

In ἡμέτερα τις ἀρχή, then, the emphasis seems to be on ἀρχή rather than on ἡμετέρα.[4] The indefinite pronoun following ἡμέτερα merely indicates that the phrase is predicative[5] (*contra* R-F: "in a way"); cp. e.g. Plato *Gorg*. 494 B 6 χαραδριοῦ τινα αὖ σὺ βίον λέγεις.

The first distinction is genuinely Aristotelian;[6] different kinds of epistemological priority are distinguished by Aristotle in e.g.

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[1] For variant manuscript readings see L-M *app. crit.* (and their note *ad loc.*).

[2] For ἤ introducing an equivalent alternative cp. 9 a 22 above. Of course ἤ as such might introduce a more likely alternative as well; in the present context this seems to be the less plausible interpretation, since (i) the point is apparently that the objects of thought provide us with a definite starting-point—which applies in the case of the first distinction as well; (ii) ἀρχαὶ δὲ τρόπον τινὰ ἄμφω would be pointless if the charcaterization of τὰ νοητά as ἀρχαί of some kind would be considered meaningless altogether.

[3] The way of phrasing of τὸ μὲν τέλος which diverges from that involved in ἡ μὲν (sc. ἀρχή) ... ἡ δὲ (sc. ἀρχή) seems to reflect that the end is shared by all things (cp. ἁπλῶς).

[4] *Contra* R-F: "is in a way *our* starting-point".

[5] LSJ s.v. τις A.II.7.

[6] The contrast between the essential clarity of τὰ νοητὰ καὶ θεῖα (φανότατα ... κατὰ τὴν ἑαυτῶν οὐσίαν), and their obscurity to us (ἡμῖν διὰ τὴν ἐπικειμένην τοῦ σώματος ἀχλὺν σκοτεινὰ δοκεῖ καὶ ἀμυδρά) apparently already features in the *De Philos.* (= Philop. *In Nicom.* I.1, Fr. 8 p.76.4ff. Ross).

Arist. *EN* 1095 b 2-4 ἀρκτέον μὲν γὰρ ἀπὸ τῶν γνωρίμων. ταῦτα δὲ διττῶς· τὰ μὲν γὰρ ἡμῖν τὰ δ' ἁπλῶς. ἴσως οὖν ἡμῖν γε ἀρκτέον ἀπὸ τῶν ἡμῖν γνωρίμων.

Phys. I.1, 184 a 16-21 πέφυκε δὲ ἐκ τῶν γνωριμωτέρων ἡμῖν ἡ ὁδὸς καὶ σαφεστέρων ἐπὶ τὰ σαφέστερα τῇ φύσει καὶ γνωριμώτερα· οὐ γὰρ ταὐτὰ ἡμῖν τε γνώριμα καὶ ἁπλῶς. διόπερ ἀνάγκη τὸν τρόπον τοῦτον προάγειν ἐκ τῶν ἀσαφεστέρων μὲν τῇ φύσει ἡμῖν δὲ σαφεστέρων ἐπὶ τὰ σαφέστερα τῇ φύσει καὶ γνωριμώτερα.

The ontological counterpart to this distinction is (1) that between what is more accessible to sense perception, and what is less so,[1] (2) that between universal and particular and (3) that between that which has more reality and that which has less of it:

Arist. *An. Post.* 71 b 33 – 72 a 5 πρότερα δ' ἐστὶ καὶ γνωριμώτερα διχῶς· οὐ γὰρ ταὐτὸν πρότερον τῇ φύσει καὶ πρὸς ἡμᾶς πρότερον, οὐδὲ γνωριμώτερον καὶ ἡμῖν γνωριμώτερον. λέγω δὲ πρὸς ἡμᾶς μὲν πρότερα καὶ γνωριμώτερα *τὰ ἐγγύτερον τῆς αἰσθήσεως*, ἁπλῶς δὲ πρότερα καὶ γνωριμώτερα *τὰ πορρώτερον*. ἔστι δὲ πορρωτάτω μὲν *τὰ καθόλου* μάλιστα, ἐγγυτάτω δὲ *τὰ καθ' ἕκαστα*· καὶ ἀντίκειται ταῦτ' ἀλλήλοις. See also *Met.* 1018 b 30 ff.

Met. 1029 b 3-12 πρὸ ἔργου γὰρ τὸ μεταβαίνειν εἰς τὸ γνωριμώτερον. ἡ γὰρ μάθησις οὕτω γίγνεται πᾶσι διὰ τῶν ἧττον γνωρίμων φύσει εἰς τὰ γνώριμα μᾶλλον· καὶ τοῦτο ἔργον ἐστίν, ὥσπερ ἐν ταῖς πράξεσι τὸ ποιῆσαι ἐκ τῶν ἑκάστῳ ἀγαθῶν τὰ ὅλως ἀγαθὰ ἑκάστῳ ἀγαθά, οὕτως ἐκ τῶν αὐτῷ γνωριμωτέρων τὰ τῇ φύσει γνώριμα αὐτῷ γνώριμα. τὰ δ' ἑκάστοις γνώριμα καὶ πρῶτα πολλάκις ἠρέμα ἐστὶ γνώριμα, *καὶ μικρὸν ἢ οὐθὲν ἔχει τοῦ ὄντος*· ἀλλ' ὅμως ἐκ τῶν φαύλως μὲν γνωστῶν, αὐτῷ δὲ γνωστῶν, τὰ ὅλως γνωστὰ γνῶναι πειρατέον, μεταβαίνοντας, ὥσπερ εἴρηται, διὰ τούτων αὐτῶν.

In the second case, although τὰ νοητά will be ἀρχαί in the sense of "principles" as an equivalent of αἰτία, τὰ πρῶτα,[2] they will not be ἀρχαί in the practical sense of starting-points. From the perspective of this chapter (and in the present paragraph in particular: μέχρι πόσου ... ζητητέον αἰτίας 9 b 2-3) the objects of sense and those of the intellect constitute the beginning and the end (respectively) of both the epistemological and the ontological 'route'.[3] It seems clear that even if the use of ἤ does not (or not necessarily: see above)

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[1] Cp. Arist. *Phys.* 188 b 30 ff., where (in doxographical context) the opposition between principles which are γνωριμώτερα κατὰ τὸν λόγον and those γνωριμώτερα κατὰ τὴν αἴσθησιν are exemplified by περιττὸν καὶ ἄρτιον, νεῖκος καὶ φιλίαν, τὸ μέγα καὶ τὸ μικρόν and θερμὸν καὶ ψυχρόν, ὑγρὸν καὶ ξηρόν, τὸ μανὸν καὶ τὸ πυκνόν respectively.

[2] Cp. 4 a 15-6, where ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς represents the possible relation between τὰ νοητά on the one hand and τὰ τῆς φύσεως on the other.

[3] Cp. 6 b 21-2: ἔνθα μὲν γὰρ τῶν ἀρχῶν sc. ἡ ζήτησις, with regard to the first, unmoved principles; ἐν δὲ ταῖς λοιπαῖς ἀπὸ τῶν ἀρχῶν ἡ ζήτησις (where, as was argued *ad loc.*, reference is either to the objects of sense or ('if they are known') to the the elementary principles even prior to these.

express a preference for the second alternative, what this distinction amounts to is that we have some definite ἀρχή at least in the objects of sense.

In the light of the conclusion to Ch. III above, that metaphysics and the science of nature should not be separated, it may be noted that only one route of inquiry is taken into account here: the quest for the first things (ἀρχαί only for non-practical purposes) starts from the objects of sense in any case.[1]

9 b 8-9 μέχρι μὲν οὖν ... λαμβάνοντες·

μὲν οὖν indicates that this is the point to which the preceding is leading us: taking our starting-point from sense-perceptions (**ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες**) we are able proceed in our quest for causes up to some point (**μέχρι ... τινός**), i.e. but for a final step which cannot be made by means of this process: μέν is answered by δέ in 9 b 10.

For ἀρχὴν or, as here, ἀρχὰς λαμβάνειν with ἀρχήν/ἀρχάς as a predicate compare

> Arist. *Meteor.* 357 b 23-4 ἡμεῖς δὲ λέγωμεν ἀρχὴν λαβόντες τὴν αὐτὴν ἣν καὶ πρότερον.
> *Pol.* 1290 b 21-3 ὅτι μὲν οὖν πολιτεῖαι πλείους, καὶ δι' ἣν αἰτίαν, εἴρηται· διότι δὲ πλείους τῶν εἰρημένων, καὶ τίνες καὶ διὰ τί, λέγωμεν ἀρχὴν λαβόντες τὴν εἰρημένην πρότερον.
> *GC* 326 b 29-30 τίνα δὲ τρόπον ὑπάρχει τοῖς οὖσι γεννᾶν καὶ ποιεῖν καὶ πάσχειν, λέγωμεν λαβόντες ἀρχὴν τὴν πολλάκις εἰρημένην.

Here the plural is distributive (see also ὅταν ... μεταβαίνωμεν 9 b 10), the ἀρχαί being left unspecified: we take our starting-point from an act of sense perception in each case (sc. every time when we study an entity or phenomenon 'by causes').

For this notion see Arist. *Met.* 1029 b 3-12 and *EN* 1095 b 2-4 quoted *ad* 9 b 6-8, above; also

> Arist. *An. Post.* 88 a 2 ff. οὐ μὴν ἀλλ' ἐκ τοῦ θεωρεῖν τοῦτο πολλάκις συμβαῖνον τὸ καθόλου ἂν θηρεύσαντες ἀπόδειξιν εἴχομεν· ἐκ γὰρ τῶν καθ' ἕκαστα πλειόνων τὸ καθόλου δῆλον. τὸ δὲ καθόλου τίμιον, ὅτι δηλοῖ τὸ αἴτιον· ...; the process is described more detailed in 100 a 3-9:
> *ἐκ μὲν οὖν αἰσθήσεως* γίνεται μνήμη ..., *ἐκ δὲ μνήμης* πολλάκις τοῦ αὐτοῦ γινομένης ἐμπειρία· αἱ γὰρ πολλαὶ μνῆμαι τῷ ἀριθμῷ ἐμπειρία μία ἐστίν. *ἐκ δ' ἐμπειρίας* ἢ ἐκ παντὸς ἠρεμήσαντος τοῦ καθόλου ἐν τῇ ψυχῇ, τοῦ ἑνὸς παρὰ τὰ πόλλα, ὃ ἂν ἐν ἅπασιν ἓν ἐνῇ ἐκείνοις τὸ αὐτό, τέχνης *ἀρχὴ* καὶ

[1] Cp. L-M: "tout se passe comme si, à travers ce léger déplacement terminologique, Théophraste avait voulu critiquer la notion de 'principe en soi', au profit d'une approche résolument empiriste de l'accès aux principes." (*ad loc.*).

ἐπιστήμης, ἐὰν μὲν περὶ γένεσιν, τέχνης, ἐὰν δὲ περὶ τὸ ὄν, ἐπιστήμης. See also p. 397. (Cp. *Met.* 980 a 21 ff.)

It should be noted, however, that the valuation implied in our passage is different, since here the objects of sense are valued because they at least provide a definite starting-point, in contrast to the ultimate causes which are hard to define.

δυνάμεθα, contrasting with οὐκέτι δυνάμεθα in 9 b 11 below, conveys the more positive analysis of the situation which was characterized as a difficulty in what precedes: although the limits of knowledge and being are difficult to grasp, we are still able to pursue the process of acquiring knowledge of causes up to the principles themselves.

δι' αἰτίου θεωρεῖν coheres as one expression ("study things causally"), δι' αἰτίου being a somewhat exceptional case of διά + gen. with 'adverbial' force: compare διὰ τάχους, διὰ βίας or, with the plural, e.g. διὰ βραχέων ἐπιμνησθῆναι.[1] The process seems to coincide with that described at the beginning of this chapter (8 b 10 ff.), according to which sense perception tries to identify possible causes and offers them to διάνοια for consideration, to be either accepted or rejected.

9 b 10-3 ὅταν δὲ ... βλέπειν.

When passing to the ultimate principles of being themselves (for αὐτὰ τὰ ... see *ad* 7 a 20) we are no longer capable of "studying <things> causally", i.e. of acquiring knowledge of them by identifying their cause. For **μεταβαίνειν** used in a similar context, see τὰ ὅλως γνωστὰ γνῶναι πειρατέον, μεταβαίνοντας ... διὰ τούτων αὐτῶν (sc. τῶν φαύλως μὲν γνωστῶν, αὐτῷ δὲ γνωστῶν), Arist. *Met.* 1029 b 5 ff. quoted *ad* 9 b 6-8. In κἂν μὴ δύνηται προβαίνειν (8 b 14) a similar conception seems to be implied.

As was said *ad* 7 b 5-8, p. 392 above, μεταβαίνειν/μετάβασις seems to be be used with ἐπί τι or εἴς τι indifferently. In the present context the the

[1] Plato *Menex.* 238 B 8 – C 1; see K-G II.1 483 (e). It may be supposed that the plural δι' αἰτίων θεωρεῖν, which might have been more natural, was avoided here because of the risk of an 'instrumental' interpretation ("study things by causes": cp. e.g. *HP* VII.5.4 τὰ μὲν οὖν συμβαίνοντα διὰ τούτων θεωρητέον ("In these instances we may observe the accidents which occur to pot-herbs", tr. HORT), cp. IV.14.14 διὰ τούτων θεωρείσθωσαν, *CP* VI.15.1 διὰ τῶν εἰρημένων θεωρείσθω; Arist. *Meteor.* 353 b 17-8 ὅτι μὲν οὖν πηγὰς τῆς θαλάττης ἀδύνατον εἶναι, διὰ τῶν ὑπαρχόντων ἤδη θεωρεῖν δεῖ: "we must now observe through the facts that there cannot be springs of the sea") which is obviously not in accordance with the purport of the present passage.

idea is apparently that the ultimate principles are reached, even though here our study of things by causes is inadequate; one might compare

> *CP* II.18.3 ἀφαυαίνεται δὲ τελέως ὅταν ἐπὶ τὰ ἄκρα συναυξηθῇ· τότε γὰρ καταπέττει καὶ ἐξαιρεῖται πανταχόθεν τὴν τροφήν.[1]

The phrase **τὰ ἄκρα καὶ πρῶτα** also in Plato *Ep.* VII 344 D 4-5 ἔγραψέν τι τῶν περὶ φύσεως ἄκρων καὶ πρώτων.[2] In our text the ontologically primary extremes of being apparently coincide with (the 'highest' of) τὰ πρῶτα καὶ νοητά in 9 a 12: see αὐτῷ τῷ νῷ ... θιγόντι 9 b 14-5. The local metaphor which underlies τὰ ἄκρα accords with the idea of an epistemological journey implied by μεταβαίνωμεν in 9 b 10-1.

When we proceed to the ultimate principles of being we are no longer capable to "study <things> causally", i.e. to acquire knowledge of them by identifying their cause, for whichever of two reasons (**εἴτε ... εἴτε**): either because the 'first things' do not have a cause, or owing to human weakness.[3]

With regard to these possibilities it should be noted that Th. is, in fact, convinced that at *some* point in the hierarchy of being there must be something without a cause, as the only alternative to an infinite regress: see 9 b 1 ff., 9 b 21-4. (And the expression of τὰ ἄκρα καὶ πρῶτα as such suggests that the series is finite.) If we are unable to proceed along the route of αἰτίαι this is either because they do not have a cause (**διὰ τὸ μὴ ἔχειν αἰτίαν**), i.e. because they actually *are* τὰ ἄκρα καὶ πρῶτα, or **διὰ τὴν ἡμετέραν ἀσθένειαν** because our vision fails to observe entities of such a luminous nature (sc. if there were a further cause). The perspective is that of the investigator who does not know which of these possibilities applies.[4] See 9 b 16 ff., below.

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[1] "The trees wither completely when ivy grows to the top, since it then concocts its fruit and extracts its food from all parts of the tree", tr. Einarson/Link; "Ivy does not bear fruit until it has outgrown the climbing stage", Einarson/Link *ad loc.*

[2] The author is criticizing Dionysius' attitude in respect of the primary entities—for Plato, of course, the Ideas.

[3] Cp. Arist. *Met.* α 993 b 7-9 ἴσως ... οὐκ ἐν τοῖς πράγμασιν ἀλλ' ἐν ἡμῖν τὸ αἴτιον αὐτῆς (sc. τῆς χαλεπότητος), where the difficulty consists in discovering the truth about particular parts of reality, although we do have some grasp of the whole. See also below.

[4] *Contra* L-M: "La logique de la disjonction semblerait exiger que les principes aient maintenant une cause, qui *nous* serait simplement inaccessible (en raison de notre faiblesse). L'idée est paradoxale, puisqu'elle suppose que les premiers principes aient eux-mêmes une cause, et ne soient donc pas premiers." "Mieux vaut admettre une légère imprécision de l'expression [sc. rather than ascribing to Th. νοητά which are called πρῶτα but do have a cause]. Théophraste envisage seulement l'hypothèse que nous sommes également incapables d'avoir un accès direct (intuitif) aux réalités prémières, qui sont naturellement dépourvues de cause." (*ad loc.*).

For the infinitive of **βλέπειν**[1] see R-F *ad loc.* For βλέπειν **πρός** τι (likewise referring to abortive perception) compare

> Plato *Phaedo* 99 D 4 – E 4 ἔδοξε τοίνυν μοι ... δεῖν εὐλαβηθῆναι μὴ πάθοιμι ὅπερ οἱ τὸν ἥλιον ἐκλείποντα θεωροῦντες καὶ σκοπούμενοι πάσχουσιν· διαφθείρονται γάρ που ἔνιοι τὰ ὄμματα, ...· τοιοῦτόν τι καὶ ἐγὼ διενοήθην, καὶ ἔδεισα μὴ παντάπασι τὴν ψυχὴν τυφλωθείην βλέπων πρὸς τὰ πράγματα (here sc. the physical objects) τοῖς ὄμμασι καὶ ἑκάστῃ τῶν αἰσθήσεων ἐπιχειρῶν ἅπτεσθαι αὐτῶν.

The metaphor used by Th. corresponds to the first image, the observation of the sun (τὸν ἥλιον ... θεωροῦντες), and the drift of the present passage is different insofar as the emphasis is upon the insufficiency of human vision rather than upon some damage risked by the act of perception.

Arist. *Met.* α 993 b 9-11 (immediately following the sentence quoted in n. 3 above) is more closely analogous:[2]

> ὥσπερ γὰρ τὰ τῶν νυκτερίδων[3] ὄμματα πρὸς τὸ φέγγος ἔχει τὸ μεθ' ἡμέραν, οὕτω καὶ τῆς ἡμετέρας ψυχῆς ὁ νοῦς πρὸς τὰ τῇ φύσει φανερώτατα πάντων.

What Th. has in mind when using this picture seems to be that when in our 'causal observations' starting from sense-perception we are unable to find the cause of the ultimate principles, this may be because they are shedding, as it were, too much ontological light.[4] The analogy with the sun, which operates as the cause of organic nature just as the 'ultimate principles' relate to the cosmos as a whole, is only implicit, but obvious from Th.' wording; it is enhanced by the wide reference of θεωρεῖν (see commentary *ad* θεωρία, 4 a 3).

The term **φωτεινός** seems to apply primarily to the sun as the source of light.[5] The idea of light in its purest form seems to be relevant here because it may be maintained of the ultimate principles too that, although they are apt to shed light over the other parts of reality, they themselves are by no means easy to discern.[5] For **ὥσπερ** see *ad* 4 a 11-2.

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[1] βλέποντες Usener (1890).

[2] R-F (*ad loc.*) speak of a "reminiscence" of the *Met.* α passage. Reale is going even further when he uses the resemblance between these passages as an indication for the authenticity of Book α (71 n. 141; 134); cp. Reale (1961) 46-53.

[3] Or, I would suggest: νυκτερινῶν; cp. Mitcham (1970) 45-6 on (Aristotle's knowledge of) the sight of owls. See also 260 FHS&G.

[4] For the idea that what is too light cannot be seen, cp. Arist. *DA* 422 a 22 ((τὸ λίαν λαμπρόν) ἀόρατον); also Stob. IV.273.2 ff. δι' ὑπερβολὰν λαμπρότατος δυσοράτω (5).

[5] See Schmidt I.590, who argues that the word was coined by Xenophon to express the mere element of light, without any further connotations: Xen. *Mem.* 4.3.4 ὁ ... ἥλιος φωτεινὸς ὢν τάς τε ὥρας τῆς ἡμέρας ἡμῖν καὶ τἆλλα πάντα σαφηνίζει ("in ihrer Natur als Quelle des Lichtes", Schmidt *l.c.*).

[6] φωτεινώτατα, then, seems to make superfluous an addition like τὰ τῇ φύσει φανερώτατα

Finally, the idea that excess of light thwarts observation invites comparison with Th.' physiological theory of vision: ὄψις reaches into the distance, but when we are looking upwards it does not do so, but it is "cut off in the light" (so that in this case we are feeling no dizziness, as we do when looking down): ἀναβλέπουσι δ' οὐ συμβαίνει τοῦτο διὰ τὸ μὴ ἀποτείνειν μακρὰν ἀλλ' *ἀποτέμνεσθαι ἐν τῷ φωτί.* (*Vert.* 8). Compare also *Sens.* 18 τὸ ... ἔλαττον πῦρ ὑπὸ τοῦ πλείονος φθείρεται, διὸ καὶ πρὸς τὸν ἥλιον καὶ ὅλως τὸ καθαρὸν οὐ δυνάμεθ' ἀντιβλέπειν.[1]

9 b 13-6 τάχα δ' ... περὶ αὐτά.

Th. adds that the situation described above as our leaving the epistemological journey which starts from sense-perception unfinished might be characterized with more claim to truthfullness as follows. The use of **ἐκεῖνο** referring forward[2] may be accounted for by the fact that what follows is new[3] (and in this sense 'more remote' than the preceding: see *ad* 5 a 26). For **τάχα δ' ἀληθέστερον** cp. τάχα δ' ἀληθέστερον εἰπεῖν 8 b 12 with note *ad loc.*

It may be more in accordance with reality that our journey of δι' αἰτίου θεωρεῖν comes to an end, *not* because of an incapacy on our part but rather owing to an observation (**ἡ θεωρία** sc. ἐστι)[4] of entities of this kind (**τῶν τοιούτων**, sc. primary entities) by νοῦς itself. Cp. αὐτῷ τῷ ἀγνώστῳ 9 a 22. For **αὐτῷ τῷ** νῷ, see *ad* 4 b 4. The principles, as it were, constitute the νοῦς' proper object of perception (τὸ ἴδιον); compare

> Arist. *DA* 418 a 11-3 λέγω δ' ἴδιον μὲν ὃ μὴ ἐνδέχεται ἑτέρᾳ αἰσθήσει αἰσθάνεσθαι, καὶ περὶ ὃ μὴ ἐνδέχεται ἀπατηθῆναι, οἷον ὄψις χρώματος καὶ ἀκοὴ ψόφου καὶ γεῦσις χυμοῦ, ...

The plural used throughout this passage (τὰ ἄκρα καὶ πρῶτα; τῶν τοιούτων; αὐτά) confirms the suggestion that we again have a method peculiar to some particular class of entities; cp. 9 a 18 ff.

As with visual perception (as well as with the other senses), noetic perception may be expressed metaphorically in terms of touch (**θιγόντι καὶ οἷον ἀψαμένῳ**), arguably the least mysterious among the senses.

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in *Met.* α 993 b 11 (above). In 9 b 6-8 above Th. suggests that one can do without a contrast between τὰ τῇ φύσει φανερώτατα and τὰ φανερώτατα ἡμῖν as implied in that passage (see note *ad loc.*).

[1] See also STRATTON (1917) 30-1.

[2] See *ad* 5 a 26, p. 184 above.

[3] Cp. the frequent occurrence of κἀκεῖνο in such contexts: see the examples quoted *ad* 11 a 14, pp. 551 f. below.

[4] For θεωρία/θεωρεῖν see *ad* 4 a 3; an early parallel for reason featuring as a (superior) organ of perception is found in Emp. B 17.21: τὴν (sc. φιλότητα) σὺ νόῳ δέρκευ, μηδ' ὄμμασιν ἧσο τεθηπώς.

For the (other) senses, see Plato *Phaedo* 99 E 3-4 τοῖς ὄμμασι καὶ ἑκάστῃ τῶν αἰσθήσεων ἐπιχειρῶν ἅπτεσθαι αὐτῶν: see preceding note; for 'psychic' or mental perception,[1] e.g.

Plato *Phaedo* 65 B 9-11 πότε οὖν, ἦ δ' ὅς, ἡ ψυχὴ τῆς ἀληθείας *ἅπτεται*; ὅταν μὲν γὰρ μετὰ τοῦ σώματος ἐπιχειρῇ τι σκοπεῖν, δῆλον ὅτι τότε ἐξαπατᾶται ὑπ' αὐτοῦ.

Tht. 209 A 8 (ἄλλο τι ...) τούτων οὐδενὸς *ἡπτόμην* τῇ διανοίᾳ;

186 D 3-4 οὐσίας γὰρ καὶ ἀληθείας ἐνταῦθα μέν (sc. ἐν τῷ ... συλλογισμῷ), ὡς ἔοικε, δυνατὸν ἅψασθαι, ...

Although θιγγάνειν is the more recherché of these terms,[2] **οἷον** marks ἅπτεσθαι as the more daring metaphor, presumably because of the dignity of the objects involved.[3] Cp. Aristotle's use of θιγγάνειν rather than ἅπτεσθαι in a similar context:[4]

Arist. *Met.* 1051 b 24 (of τὰ ἀσύνθετα): ἔστι τὸ μὲν ἀληθὲς ἢ ψεῦδος, τὸ μὲν θίγειν καὶ φάναι ἀληθές (...), τὸ δ' ἀγνοεῖν μὴ θιγγάνειν· ἀπατηθῆναι γὰρ περὶ τὸ τί ἐστιν οὐκ ἔστιν ἀλλ' ἢ κατὰ συμβεβηκός· ὁμοίως δὲ καὶ περὶ τὰ μὴ συνθετὰς οὐσίας· οὐ γὰρ ἔστιν ἀπατηθῆναι· ...

The addition of καὶ οἷον ἁψαμένῳ might have polemical significance, insofar as it goes beyond the more cautious Aristotelian way of expression. A genuine 'contact' between the human mind and the principles would involve the risk of a loss of stability (and hence, traditionally, worthiness) on the part of the principles themselves, since an object of perception is always liable to 'being acted upon':[5] e.g. Arist. *DA* 424 a 1 τὸ γὰρ αἰσθάνεσθαι πάσχειν τι ἐστίν.

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[1] The physiological metaphor does not fail to worry Plato: *Phaedo* 65 C 7-9 ὅτι μάλιστα αὐτὴ (sc. ἡ ψυχή) καθ' αὑτὴν γίγνηται ἐῶσα χαίρειν τὸ σῶμα, καὶ *καθ' ὅσον δύναται* μὴ κοινωνοῦσα αὐτῷ *μηδ' ἁπτομένη* ὀρέγεται τοῦ ὄντος.

[2] Cp. however, in a physical context without any indication that the adaptation of a literary term would be concerned, *Ign.* 25 (of vinegar reaching the focus of fire): πάλιν δὲ τὸ ὄξος σβεστικώτερον τοῦ ὕδατος καὶ διὰ τὴν αὐτὴν αἰτίαν θερμότατον ὂν τῶν λοιπῶν. εἰσδύεται γὰρ μάλιστα καὶ πλεῖστον, ὥστε θιγγάνειν τῆς ἀρχῆς.

[3] Cp. SCHMIDT I.233: "Übertragen (...) auf Abstraktes bedeutet ἅπτεσθαι nicht wie θιγγάνειν (...) ein Erreichen, dahin Gelangen, sondern die ernste Beschäftigung mit dem Gegenstande, die dauernde Aneignung."

In this light the use of the metaphor in Arist. *Met.* 1072 b 19-21 is somewhat puzzling: αὑτὸν δὲ νοεῖ ὁ νοῦς κατὰ μετάληψιν ('participation') τοῦ νοητοῦ· νοητὸς γὰρ γίγνεται θιγγάνων καὶ νοῶν, ὥστε ταὐτὸν νοῦς καὶ νοητόν.—where ἅπτεσθαι might have been the more proper term, since the divine νοῦς actually coincides with its object.

[4] Cp. Arist. *Met.* α 993 a 31 quoted *ad* 4 b 17-8, p. 136 above.

[5] One may compare the remarks on the subject ascribed to Th. by Prisc. and Them. (307A and B FHS&G), involving a potential way of escape out of the Aristotelian impasse: ἀπαθὴς γὰρ ... ὁ νοῦς, *εἰ μὴ ἄρα ἄλλως παθητικός* (307A.25-6); οὐχ ὡς τὸ κινητὸν ληπτέον (ἀτελὴς γὰρ ἡ κίνησις), ἀλλ' ὡς ἐνέργειαν (26-7). See also *ad* 4 a 6-9 and 7 b 19-22 above.

It has been maintained that this assault upon the stability of the principles was unwelcome to Aristotle himself;[1] yet there are at least two passages in Aristotle's works where νοῦς ("intuition" MURE, TREDENNICK, "comprehension" BARNES, "Intelligence" RACKHAM) is presented as the epistemological coping-stone:

> Arist. *An. Post.* 100 b 11-7 (...) ἐπεὶ δ' οὐδὲν ἀληθέστερον ἐνδέχεται εἶναι ἐπιστήμης ἢ νοῦν, νοῦς ἂν εἴη τῶν ἀρχῶν, ἔκ τε τούτων σκοποῦσι καὶ ὅτι ἀποδείξεως ἀρχὴ οὐκ ἀπόδειξις, ὥστ' οὐδ' ἐπιστήμης ἐπιστήμη. εἰ οὖν μηδὲν ἄλλο παρ' ἐπιστήμην γένος ἔχομεν ἀληθές, νοῦς ἂν εἴη ἐπιστήμης ἀρχή. καὶ ἡ μὲν ἀρχὴ τῆς ἀρχῆς εἴη ἄν, ἡ δὲ πᾶσα ὁμοίως ἔχει πρὸς τὸ πᾶν πρᾶγμα. (See also *ad* 8 b 12-6.)
>
> *EN* 1140 b 31 – 1141 a 8 ἐπεὶ δ' ἡ ἐπιστήμη περὶ τῶν καθόλου ἐστὶν ὑπόληψις καὶ τῶν ἐξ ἀνάγκης ὄντων, εἰσὶ δ' ἀρχαὶ τῶν ἀποδεικτῶν καὶ πάσης ἐπιστήμης (μετὰ λόγου γὰρ ἡ ἐπιστήμη), τῆς ἀρχῆς τοῦ ἐπιστητοῦ οὔτ' ἂν ἐπιστήμη εἴη οὔτε τέχνη οὔτε φρόνησις· ... εἰ δὴ οἷς ἀληθεύομεν καὶ μηδέποτε διαψευδόμεθα ..., ἐπιστήμη καὶ φρόνησίς ἐστι καὶ σοφία καὶ νοῦς, τούτων δὲ τῶν τριῶν μηδὲν ἐνδέχεται εἶναι ..., λείπεται νοῦν εἶναι τῶν ἀρχῶν.

Whether or not Aristotle at some time or in some contexts may have been inclined to adopt the possibility of noetic perception of the ultimate principles (and in other contexts may have had reasons to avoid doing so),[2] Th. in the present passage expressly advances this point of view as a comparatively plausible solution to the problem of an infinite regress.

διὸ καί (see also10 a 10, 11 b 7 below) adds a consequence, a result, or merely something that can be understood on the basis of the preceding—a

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[1] "Man muss (...) die Prinzipien auf andere Weise kennen als das, wofür sie Prinzip sind. Auf welche Weise gelangt man dann aber zu den Prinzipien? In der sich auf Aristoteles berufenden Tradition ist der Ausweg sehr beliebt geworden, die Prinzipien als Gegenstand einer unmittelbaren intuitiven Einsicht anzusehen. Aristoteles beruft sich in der konkreten Prinzipienforschung jedoch niemals auf eine keiner weiteren Argumentation bedürftige Evidenz, ..." WIELAND ([2]1970) 61-2; cp. *ibid.* 67, n. 11.

[2] WIELAND ([2]1970) regards these passages as exceptional, the idea that there would be a principle *of the principles* being usually rejected by Aristotle: "Damit betritt Aristoteles aber eine neue Reflexionsstufe. Der Nous ist nicht nur graduell von der Gesamtheit der Prinzipien unterschieden, die niemals aus ihm wie aus einem Überprinzip einfach abgeleitet werden können. Er ist nur eine notwendige Bedingung für die Möglichkeit, Prinzipien zu finden und mit ihnen zu arbeiten." (108 n. 10; cp. also 337).

BARNES (1975) 256 ff. holds that in the passage from *An. Post.* νοῦς does not refer to a faculty or method to acquire knowledge at all, but rather conceives of νοῦς as a state or disposition, and concludes to a *non liquet*:

"Aristotle's conclusion (...) is aphoristic. I do not think that we are expected to pay philosophical attention to it—nor, for that matter, to the [question what is the state, or *hexis*, that grasp the principles] as a whole. *Nous* has no philosophical importance in *APst.*" (259).

way of phrasing favoured by our author: see e.g. *Ign.* 11, 15, 16, 22, 23, 24, 27, 29, *et passim*; *CP* I.4.3, 4, 5; 5.2, 4; 6.4, 6, 8, 10, &c. Cp. also *ad* 5 b 4 above.

As a consequence of the immediate mental apprehension of the ultimate principles, there can be no deception about them (**οὐκ ἔστιν ἀπάτη περὶ αὐτά**): just as we either grasp some particular object or do not grasp it, we either apprehend the ultimate principles or fail to do so.[1]

VIII. 5 (9 b 16-24): *Although the question where to stop searching for an explanation, apart from its general importance, is crucial for our knowledge of a particular object (and for the most important ones especially), there is something in the intellectual attitude of the investigator which hinders him from accepting any explanation as ultimate, whether his field of study concerns nature or entities even prior to this. Still, it is essential that he should do so, since people who try to explain everything destroy explanation and knowledge—or rather: one* should *try to explain 'all things' in the sense of each and every part of the cosmos, but one should* not *try to provide an explanation even of the limits of being and knowledge.*

9 b 16-21 χαλεπὴ δὲ καὶ ... περὶ τὰς ἔτι πρότερας.

περὶ τὰς τῆς φύσεως Usener (1890); περί τε MSS.; περὶ τὴν Usener (1861) 262, "et ut vid. Isḥāq" (L-M *app. crit.*).

For (**δὲ**) **καί** see *ad* 5 a 23-5. Th. goes on to say that it is difficult for the investigator to be sure that the limit of his investigation has been reached, just as it was implied with reference to the limits of reality by the disjunction εἴτε ... εἴτε in 9 b 11-3. **αὐτὸ τοῦτ**(o) refers back to this dilemma, which will be made explicit in a more practical form, by ἐν τίνι ποιητέον τὸν ὅρον (9 b 19-20).[2] There is something in the psychological set-up of the philosopher or

[1] Cp. *Met.* 1051 b 24 quoted above, and Tredennick *ad loc.*: "*i.e.*, we cannot be mistaken with regard to a simple term X. We either apprehend it or not. Mistake arises when we either predicate something wrongly of X, or analyse X wrongly." When apprehension takes place by means of νοῦς itself, of course, our epistemological journey is past the stage of mistaken interpretations.
Cp. also Proclus *ad Tim.* 92 E, I.303.3-23 D., quoted *ad* 9 b 2, p. 446 n. 3.

[2] Differently L-M: "Le plus simple serait de rapporter [αὐτὸ τοῦτο] à l'idée que l'intellect saisit infailliblement les principes (9b14s.), mais l'articulation avec la suite (ἐπεὶ καὶ ...) n'apparaît pas. On pourrait à la rigueur imaginer que le renvoi est au thème principal de la limite, énoncé en 9b1-4, mais qui n'a pas encore été explicité en raison du développement intermédiaire consacré à la saisie intuitive des premiers principes (9b8-16). Il est sans doute plus

scientist, as it were, which hinders him from accepting any explanation as the ultimate one (i.e., as an ἀνυπόθετον).

ἡ σύνεσις καὶ ἡ πίστις together express a confidence based on understanding with regard to the subject-matter at issue. Here σύνεσις[1] is the insight that this particular account is the last one in the series, in contrast to the previous ones which required further explanation. Compare

> Arist. *Div.* 462 b 26 τὸ γὰρ περὶ τῶν ἐφ' Ἡρακλείαις στήλαις ἢ τῶν ἐν Βορυσθένει προορᾶν τινάς, ὑπὲρ τὴν ἡμετέραν εἶναι δόξειεν ἂν σύνεσιν εὑρεῖν τούτων τὴν ἀρχήν.
>
> *HA* 588 a 29 ὡς γὰρ ἐν ἀνθρώπῳ τέχνη καὶ σοφία καὶ σύνεσις, οὕτως ἐνίοις τῶν ζῴων ἐστί τις ἑτέρα τοιαύτη φυσικὴ δύναμις.

πίστις is used to refer to (the attitude which accompanies) the absence of doubt. Cp. 301B FHS&G (Θεόφραστος δὲ τὴν αἴσθησιν ἀρχὴν εἶναι πίστεώς φησιν, quoted *ad* 8 b 12-6, p. 398 above);[2] also

> *Sens.* 31 δοκεῖ ... ἡ ἀλλοίωσις οὐχ ὑπὸ τῶν ὁμοίων, ἀλλ' ὑπὸ τῶν ἐναντίων εἶναι. καίτοι καὶ τοῦτο δεῖται πίστεως, εἰ ἀλλοίωσις ἡ αἴσθησις εἴ τε τὸ ἐναντίον τοῦ ἐναντίου κριτικόν.

For εἰς αὐτὸ τοῦτ' see above. **εἰς** "überhaupt zur Angabe einer *Rücksicht auf* einen Gegenstand", K-G II.1.471(c). Cp. Plato *Gorg.* 491 B 1 οἳ ἂν εἰς τὰ τῆς πόλεως πράγματα φρόνιμοι ὦσιν.[3]

ἐπεὶ (καὶ ἄλλως μέγα κ.τ.λ.): the circumstances that attend the difficulty stand in a noticeable contrast to it: while the question where to stop one's account of some particular thing is crucial, one is never certain that this point has been reached. The translation "though"[4] is based on the relation between the content of the two sentences rather than on the value of the conjunction. Compare

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naturel de prendre εἰς αὐτὸ τοῦτο proleptiquement, pour annoncer l'interrogative ἐν τίνι ποιητέον τὸν ὅρον ... (la structure de la phrase est alors parallèle à celle de 9b1-4, où τοῦτο, 9b1, annonce μέχρι πόσου, b2). En tout état de cause, on rattachera l'interrogative ἐν τίνι ποιητέον τὸν ὅρον à μέγα et ἀναγκαῖον." (*ad loc.*).

[1] Cp. *ad* 5 b 18. In *CP* II.4.8 Th. speaks of αἰσθητικὴ σύνεσις, an insight based on sense perception, which it is not easily accounted for: καὶ τὸ καθόλου λεχθέν, ὑπὲρ πάντων ἴσως τῶν δένδρων ἀληθές, ὅτι καθ' ἑκατέρας τὰς χώρας ἑκάτερα δεῖ καὶ τῶν δένδρων φυτεύειν· ἀλλ' ἐν τοῖς καθ' ἕκαστα τὸ ἀκριβὲς μᾶλλον ἴσως αἰσθητικῆς δεῖται συνέσεως, λόγῳ δὲ οὐκ εὐμαρὲς ἀφορίσαι.

[2] Barbotin (1954) 75 n.1 *ad loc.*: "πίστις signifie ici non pas la *croyance*, adhésion imparfaite de l'esprit à une proposition, mais la *certitude* imposée par l'évidence sensible".

[3] Also 491 C 6-7; cp. 490 B 7 ἄλλο τι ἢ οὗτος, φρονιμώτερος ἡμῶν ὤν, βελτίων καὶ κρείττων ἔσται εἰς ταῦτα; (cp. περὶ ταῦτα B 5).

[4] "bien qu[e]" L-M; *contra* R-F "since", Reale/Catan "because".

Arist. *HA* 587 b 31 τοῦ γάλακτος δ' ἐξιόντος οὐ γίνονται αἱ καθάρσεις ὡς ἐπὶ τὸ πολύ, ἐπεὶ ἤδη τισὶ θηλαζομέναις ἐγένετο κάθαρσις ("though the discharge has been known to occur during the period of suckling.", *RevOT*);

541 a 32 ἡ δ' ἀληθινὴ σύνοδος τῶν ᾠοτόκων ἰχθύων ὀλιγάκις ὁρᾶται διὰ τὸ ταχέως ἀπολύεσθαι παραπεσόντας, ἐπεὶ ὦπται καὶ ἡ ἐπὶ τούτων ὀχεία γιγνομένη τὸν εἰρημένον τρόπον. ("But, for all that, the process has been observed in these cases too to take place in the manner above described.", *RevOT*).

καὶ ἄλλως μέγα i.e., an important issue otherwise, that is, presumably: in general; as was pointed out in 9 b 4-5, an infinite regress would destroy our understanding. Compare

Arist. *Phys.* 196 b 2 πρὸς γὰρ τῷ καὶ ἄλλως ἄτοπον εἶναι τὸ λεγόμενον, ἔτι ἀτοπώτερον τὸ λέγειν ταῦτα ὁρῶντας κ.τ.λ.[1] (See *ad* 7 a 10 ff., p. 301 above.)

With the phrasing καὶ ἄλλως ... καὶ ..., the second καί is followed by what has particular relevance: apart from being important in general, the question where to stop one's account is necessary (**ἀναγκαῖον**) for the investigator's treatment of his subject. The necessity involved here is apparently an example of necessity "ἐξ ὑποθέσεως"; in the Aristotelian division of ἀναγκαῖον in *Met.* 1015 a 20 ff. this use would presumably come under ὧν ἄνευ τὸ ἀγαθὸν μὴ ἐνδέχεται ἢ εἶναι ἢ γένεσθαι (1015 a 22-3); for which notion, see also *Somn.* 455 b 26 ff.

Compare

HP IV.11.5 γίνεσθαι δέ φασι τρίενόν τε χρήσιμον καὶ καταυλήσεως βραχείας δεῖσθαι καὶ κατασπάσματα τὰς γλώττας ἴσχειν· τοῦτο δὲ ἀναγκαῖον τοῖς μετὰ πλάσματος αὐλοῦσι.

and, with a final use of πρός:

HP II.7.2 (of pruning) ταύτῃ γὰρ (sc. the vine) ἀναγκαιότερον καὶ πρὸς βλάστησιν καὶ πρὸς εὐκαρπίαν.

ἀναγκαῖον in the present context, then, relates to μέγα as species to genus, while πρὸς τὰς καθ' ἕκαστα πραγματείας is opposed to καὶ ἄλλως: the specialist, whether on physical or on metaphysical subjects (see below) cannot avoid this issue. Compare, with a more limited reference,

Arist. *Cael.* 298 b 4-5 τοῦτο δὲ δῆλον ἔκ τε τοῦ διωρίσθαι τὰ ποῖά ἐστι φύσει, καὶ ἐκ τῆς καθ' ἕκαστα θεωρίας ("from a study of each separate species" GUTHRIE).

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[1] "in addition to the inherently paradoxical nature of such an assertion", WICKSTEED/CORNFORD; but "besides the other absurdities of the statement", *RevOT*.

πραγματεία, which is used with the reference the sense of "treatise" as well, in this context seems to equivalent to θεωρία (in the sense of "study").[1]

τὰς μεγίστας sc. πραγματείας: again studies are supposed to derive their importance from that of their subject-matter: see *ad* 4 a 8-9 above. The addition is appropriate in the context of the present treatise. **καὶ μάλιστα**, presumably because metaphysics "is (concerned with what is) delimited and always the same" (*ὡρισμένη* καὶ ἀεὶ κατὰ ταὐτά 4 a 6 above).[2]

τὸν ὅρον refers to the concrete limit of the investigator's explanatory activities. Compare

> *CP* III.1.6 ἐπιμαρτυρεῖ δέ πως καὶ ἐν αὐτοῖς τοῖς γεωρουμένοις τὸ μὴ φιλεῖν ἔνια τὴν ἀκριβῆ καὶ τὴν πολλὴν ἄγαν ἐξεργασίαν, ὥστε καὶ ταύτην ζητεῖν τινα ὅρον· καὶ τρόπον τινὰ οὐδὲν κωλύει κατὰ τὴν μετάβασιν οὕτως ἔνια μηδὲ ζητεῖν ὅλως.
> *HP* IX.3.4 ἐν δὲ τῇ 'Ασίᾳ φασὶ περὶ Συρίαν οὐκ ἐκπελεκῶντας τὴν δᾷδα ("pitch") ἀλλ' ἐπ' αὐτῷ τῷ δένδρῳ προσκαίειν φέροντας ὄργανόν τι περιπεποιημένον καὶ τούτῳ περιάπτοντας, εἶθ' ὅταν ἐκτήξωσι ταύτην πάλιν ἐπ' ἄλλο καὶ ἄλλο μεταφέρειν· ὅρος δέ ἐστιν αὐτοῖς τις καὶ σημεῖα τοῦ παύεσθαι[3] καὶ μάλιστα δῆλον ὅτι τὸ μηκέτι ῥεῖν.

οἷον introduces the main classes of studies to which the necessity to determine a limit applies, rather than an example of one such study;[4] compare

> Arist. *An. Post.* 90 b 33-4 ἔτι πᾶσα ἀπόδειξις τὶ κατὰ τινὸς δείκνυσιν, οἷον ὅτι ἔστιν ἢ οὐκ ἔστιν ("i.e. that it is or is not", *RevOT*)· ...
> *Sens.* 439 a 13-6 τὸ μὲν οὖν ἐνεργείᾳ χρῶμα καὶ ὁ ψόφος πῶς ἐστὶ τὸ αὐτὸ ἢ ἕτερον ταῖς κατ' ἐνέργειαν αἰσθήσεσιν, οἷον ὁράσει καὶ ἀκούσει, εἴρηται ἐν τοῖς περὶ ψυχῆς· ...

It seems best to adopt, with R-F and L-M, USENER's reading of **περὶ τὰς τῆς φύσεως** for MSS. τε, since the connection of περί + genitive and περί + accusative by means of τε ... καί seems rather awkward. τὰς τῆς φύσεως (sc. πραγματείας) and τὰς ἔτι προτέρας together represent the first division of τὰς καθ' ἕκαστα πραγματείας.[5]

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[1] Cp. Introd. p. 8.

[2] It seems unlikely that τὰς ἔτι προτέρας includes, beside metaphysical studies, mathematics as well (as THEILER (1958) 103 has it): see 4 a 18 – b 5 above. Astronomy however might be included, even if as far as Th. is concerned this study belongs to the province of physics rather (see *ad* 10 a 5-9).

[3] "a limit and indications where to stop", tr. HORT.

[4] "οἷον omnino explicandi vim [habet], iq nempe, nimirum, scilicet", BONITZ 502 a 7-8 s.v.: cp. TRICOT "je veux parler des ...", *contra* R-F "e.g. ...", L-M "par exemple".

[5] On this view, USENER's previous conjecture of περὶ *τὴν* τῆς φύσεως is less likely. One just might conjecture περὶ *τὰ* τῆς φύσεως, with a switch from reality to knowledge that would not be unique in this treatise, which would both account for the corruption and make the repetition of περί otiose.

The point at which one should stop looking for an explanation in both cases will be exemplified at the end of this chapter (10 a 9 ff.): just as the biologist should refrain from trying to account for the life of animals, so the metaphysician should not try to find an account for the movement of the cosmos. In both cases the end of the account seems to consist in just accepting movement as being 'of the nature' or 'essence' of the animal and the cosmos respectively; the consequence seems to be that the distinction between the first things and nature is effaced. See commentary *ad loc.*

9 b 21-4 οἱ ἀπάντων ... οὐδὲ πέφυκεν.

οἱ ... ἀπάντων ζητοῦντες λόγον is in a sense the more personal counterpart of ἡ ... εἰς τὸ ἄπειρον ὁδός (9 b 4), the focus now being on the investigator's attitude,[1] but the issue is now the wider one of looking for 'an account' (λόγον).

For **ἀναιρεῖν** see *ad* 9 b 4-5, pp. 447 ff. For the idea compare

85A.11-3 FHS&G (= Alex. Aphr. *In Met.* 1006 a 11) ὡς γὰρ εἶπε Θεόφραστος ἐν τῷ Περὶ καταφάσεως, βίαιος καὶ παρὰ φύσιν ἡ τούτου τοῦ ἀξιώματος (sc. the law of non-contradiction) ἀπόδειξις.

85B.4-11 FHS&G (= Syrianus *In Met.* 1006 a 11) ὥστε κρατεῖν τὸ τοῦ Θεοφράστου, ὃς ἀγνωμονεστάτους εἶναί φησι καὶ βιαιοτάτους τοὺς ἀναγκάζοντας λόγον ὑπέχειν τούτου τοῦ ἀξιώματος· αὐτόθεν γὰρ ⟨ὁ⟩ τούτῳ ἐνιστάμενος λόγου χρείαν ἀναιρεῖ καὶ ἀποδείξεως. εἰ γὰρ μηδὲν μᾶλλον τόδε ἢ τὸ ἀντικείμενον, τίς ἦν χρεία καὶ λόγου καὶ κατασκευῆς καὶ συμπεράσματος; τίς δὲ ὁ καρπὸς ταύτης πάσης πραγματείας, ὅταν ὁ πειρώμενος αὐτῷ παρίστασθαι τῶν ἡττόνων αὐτοῦ τι πρὸς ἐνάργειαν εἰς κατασκευὴν αὐτοῦ παραλαμβάνειν ἀναγκάζηται;[2]

In our passage the point, again parallel to the more ontological section earlier in this chapter, is that those who fail to acknowledge the existence of explanations which cannot be further accounted for, destroy the basis of all explanation, and thus the fundaments of knowledge as such.

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[1] There is no reason, therefore, to suppose that some particular philosopher or group of philosophers is being aimed at; *contra* R-F (*ad loc.*), who suppose that this criticism is directed against Plato (with reference to 159 FHS&G (= Proclus *In Tim.* 35 A), quoted *ad* 9 b 4-5.

[2] "For he who opposes this (axiom) immediately does away with the use of reasoning and demonstration. For if nothing is more this than its opposite, what was the use of reasoning and dialectical proof and conclusion? And what was the fruit of all this activity, when he who tries to defend it (the axiom) is forced to use in its proof something inferior to it in respect of self-evidence?" tr. FHS&G.

μᾶλλον δέ, "to correct a statement already made" LSJ s.v. μάλα II.3. It is truer (**ἀληθέστερον**)[1] to say that these people look for an account of the unaccountable. For εἰπεῖν see *ad* 9 b 2 above. Compare

> *CP* VI.7.7 αἱ δὲ καταμίξεις ὁτὲ μὲν τῶν ἔξω μιχθέντων, ὁτὲ δὲ τῶν αὐτοῦ, νοσήσαντός τινος καὶ πλεονάσαντος· τάχα δ' ἀληθέστερον εἰπεῖν ὅτι κινηθέντος τινὸς καὶ διαφθαρέντος ὑπὸ τῶν ἐκτός, οὕτως γὰρ καὶ ἡ τῶν περικαρπίων φθορά, καὶ αὐτῶν τῶν ὑγρῶν (οἷον οἴνου γάλακτος).

The correction regards ἁπάντων (ζητοῦντες λόγον) especially: in reality, what is wrong is not that these people try to explain (**ζητοῦσιν** (sc. λόγον)) *everything*, but that they try to explain that of which there is no explanation (**ὧν οὐκ ἔστιν** (sc. λόγος)), and in virtue of their nature cannot be one (**οὐδὲ πέφυκεν**).[2] Th. seems to realize that the preceding remark might be misinterpreted as an encouragement to those philosophers who are content when they have explained only *part* of reality (the very attitude criticized in Ch. III above). One *should* try to explain 'all things' in the sense of each and every part of the cosmos, but one should *not* try to provide an explanation even of the limits of being and knowledge.

VIII.6 (9 b 24 – 10 a 9) *People who stop their inquiries after having explained the first and most valuable among the physical entities (sc. the heavenly bodies) do not extend their account of the cosmos far enough; they should specify the principles and the relation between the parts of the universe as well, and after that go on to explain the lower levels of nature, too. As the practice of astronomy shows, the explanation of the cosmos extends beyond the domain of physics.*

9 b 24 – 10 a 5 ὅσοι ... καὶ φυτῶν).

ὅσοι MSS.; ὅσοι ⟨δὲ⟩ ZELLER II.2.825 n.1; lacunam indic. USENER (1861) 272 and (1890); τοῖς οὖν prop. USENER (1890), p. 429 n. 1.

As was pointed out by R-F (xxii-iii), there is no reason to assume a lacuna here as USENER (1861) did; cp. also *ad* 9 a 10-1, p. 429 n. 1.

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[1] This time without τάχα: see *ad* 9 b 13-4.

[2] Cp. ἔστη μὴ πολυπραγμονῶν τὴν αἰτίαν, ἀλλὰ φὰς οὕτω ταῦτα πεφυκέναι 158.5-6 FHS&G quoted *ad* 9 b 4-5 above. See also τό γε κινεῖσθαι καὶ ἁπλῶς τῆς φύσεως οἰκεῖον καὶ μάλιστα τοῦ οὐρανοῦ, 10 a 9-10 (with commentary *ad loc.*); also τῆς οὐσίας ἑκάστου (10 a 11), ἐν τῇ περιφορᾷ κατὰ τὴν οὐσίαν (10 a 14).

Both R-F and L-M adopt ZELLER's ὅσοι ⟨δὲ⟩. However, even apart from the fact that in a text as unpolished as the present one it seems questionable whether an editor should add a particle in order to make explicit the relation of one section to the preceding, the absence of a particle is not exceptional in cases where what has been called a 'theme' precedes (with so-called 'left dislocation'):

> *CP* VI.13.3 τοῦτο γὰρ καὶ ἐπὶ τῶν ἀγρίων καὶ ἡμέρων ὁρῶμεν· *ὧν αἱ ῥίζαι πικραὶ καὶ ὀπώδεις, τούτων* τοὺς καρποὺς γλυκεῖς, ὡς ἂν ἐξ ἀπέπτου τινὸς πεττομένους ὄντας.
>
> III.18.3 καὶ τὸ ἐπὶ τῶν ἀλῶν δὲ τὸν αὐτὸν τρόπον· *ὅπου τις ἰδιότης*, οἰκεία πρὸς τὴν φύσιν.
>
> VI.16.8 *τῶν*[1] *ὀσμῶν* ἡ μὲν ἰσχὺς ἑκάστων δῆλον ὅτι κατὰ τὴν ὑποκειμένην φύσιν.

In any case the next two paragraphs seem to contain Th.' own reflections on the question ἐν τίνι ποιητέον τὸν ὅρον. In the course of his discussion the relation between the two classes αἱ τῆς φύσεως and αἱ ἔτι πρότεραι (sc. πραγματεῖαι, 9 b 20-1) will appear to be problematic as such.

The issue of the insufficiency of astronomical research to provide an adequate account of the cosmos may have been suggested by the previous sentence in particular. What destroys explanation is not seeking for an account "of everything" (ἀπάντων 9 b 21), but rather seeking for an account of "those things which, because of their nature as genuine first things, cannot be accounted for" (ὧν οὐκ ἔστιν οὐδὲ πέφυκεν 9 b 23-4). This self-correction serves to prevent any suggestion as though the investigator would not be under the obligation to give a complete account of the cosmos. Astronomical explanation, as far removed from sense perception as it is, does not suffice: the cause of the circular movement of the heavens still requires explanation;[2] and (as was argued in Ch. III above) as one goes down, one should give an account of the objects of sense as well.

ὅσοι τὸν οὐρανόν ἀΐδιον ὑπολαμβάνουσιν confines the necessity of further investigation to those who want a guarantee for the indestructibility of the cosmos. Although this restriction calls to mind a debate between adherents of the permanence of the cosmos (e.g., Peripatetic philosophers) and those of its destructibility (e.g., the Stoics),[3] it makes sense without any reference to such conceptions: the point seems to be that astronomical research leaves the

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[1] τῶν ⟨δ'⟩ Schneider (adopted by EINARSON/LINK).

[2] Or, an explanation of some kind at least: see the next paragraph.

[3] Cp. Th.' reported criticism directed against adherents of the destructibility of the cosmos, 184 FHS&G (= Philo *de Aet. Mundi* 117).

permanence of the cosmos unaccounted for, so that the obligation to search for further explanation holds in particular for those believing in the eternity of the cosmos.[1] This more general interpretation seems to be confirmed by the use of ὅσοι (as opposed to a participle construction like τοῖς ... ὑπολαμβάνουσι).[2] It may be inferred from τά ... πρῶτα κινοῦντα and τὸ τίνος ἕνεκα (10 a 1) in particular that the universe of discourse implied is of a Peripatetic nature.

ὑπολαμβάνειν ("sumere ac statuere aliquid pro vero" Bonitz 799 b 26-7 s.v.) here with a predicate (αἴδιον); in the ἔτι-phrase the verb should apparently be understood with a direct object only.

In the relative clause τὸν οὐρανόν is likely to refer to the whole of the cosmos (cp. 5 b 20). Both in ἔτι δὲ ... δείκνυσιν and in καὶ ὑποβαίνοντι ... φυτῶν however, the more limited notion of "the heaven(s)" (i.e., τὸ συνεχὲς σῶμα τῇ ἐσχάτῃ περιφορᾷ τοῦ παντός, ἐν ᾧ σελήνη καὶ ἥλιος καὶ ἔνια τῶν ἄστρων)[3] presents itself, so that in the present passage the translation of ὁ οὐρανός as "the cosmos"[4] would make nonsense of the sequel. The situation is complicated by the fact that in the next paragraph ὁ οὐρανός refers to the first heaven in particular.[5]

ἔτι δέ is here less neutral than the common addition of a next point ("furthermore"), but rather "and besides", in a way interrupting the sequence of theme and topic ὅσοι..., τούτοις... Something like ὑπολαμβάνουσιν must be understood from what precedes.[6] ἔτι ... δείκνυσιν makes explicit the astronomical 'data' in contrast to what is left to be accounted for (κατάλοιπον); these data have special relevance here insofar as it is suggested that the supposed characteristics of the heavenly bodies, and the diversity of their motions in particular, are in conflict with the supposed permanence of the cosmos:[7] see Ch. II, 5 a 15-23.

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[1] Differently L-M: "Les calculs astronomiques présupposent en effet l'éternité du ciel, de ses parties et de ses mouvements (...), qui n'est pas une donnée astronomique, mais dépend de la démonstration des philosophes." (*ad loc.*).

[2] Cp. Usener's conjecture, above.

[3] Arist. *Cael.* 278 b 16-8: see *ad* 5 b 20, p. 231 above.

[4] In contrast to 6 a 14, where a similar difficulty applies; there the translation of "the cosmos" 'merely' spoils the connection with ὁ πρῶτος οὐρανός in 6 a 6-7.

[5] See 6 a 6-7 where τὸν πρῶτον οὐρανόν is used in a similar context.

[6] Cp. R-F *ad loc.*; L-M understand also αἴδια: see next note.

[7] *Contra* L-M: "nous sous-entendons dans le deuxième membre non seulement ὑπολαμβάνουσιν, mais aussi αἴδια. L'intéressant n'est pas que les astronomes acceptent, comme chez Platon, un certain nombre de données astronomiques (les trajectoires, les grandeurs, etc.) sans les fonder, mais que tous leurs calculs reposent sur l'hypothèse de la pérennité de leur objet." (*ad loc.*)

τὰ κατὰ τὰς φορὰς κ.τ.λ.: the facts[1] brought to light by astronomical research: cp. *HP* VI.3.2 τὰ μὲν οὖν κατὰ τὴν ἐργασίαν καὶ τομὴν οὕτως ἔχει, *CP* IV.2.1 τὰ μὲν οὖν κατὰ τὴν βλάστησιν ἐν τούτοις ἂν εἴη.

Although it is not impossible that τὰ μεγέθη, τὰ σχήματα and τὰς ἀποστάσεις correspond with τὰς φοράς (as was proposed by R-F, *ad loc.*) rather than with τὰ κατὰ τὰς φοράς, the latter seems to be more likely, in sofar as it directs special attention to the *motions* of the heavens: τὰς φοράς, sc. the circular motions of the heavenly bodies, which were already observed to be τρόπον τινὰ ὑπεναντίαι (5 a 16). As was argued in Ch. II above, this situation is inconsistent with the assumption of a single unmoved cause which imparts movement as the object of desire, so that there is no guarantee that these movements will never stop.

The computations with regard to the size of the heavenly bodies (**τὰ μεγέθη**), revealing the enormous size of the sun, the moon, and the stars as compared to that of the earth (probably to be attributed to Eudoxos),[2] aptly exemplify their remoteness, testifying to the limitations of human observation.

Arist. *Meteor.* 339 b 6-9 ὁ μὲν γὰρ τῆς γῆς ὄγκος πηλίκος ἄν τις εἴη πρὸς τὰ περιέχοντα μεγέθη, οὐκ ἄδηλον· ἤδη γὰρ ὦπται διὰ τῶν ἀστρολογικῶν θεωρημάτων ἡμῖν ὅτι πολὺ καὶ τῶν ἄστρων ἐνίων ἐλάττων ἐστίν.

That these facts must have been cause for wonder appears e.g. from

Ps.-Plato *Epin.* 983 A 2 – B 6 οὐ γάρ, ὡς σμικρὰ φαντάζεται, τηλικαῦτα ὄντως ἐστίν, ἀλλ' ἀμήχανον ἕκαστον αὐτῶν τὸν ὄγκον—πιστεῦσαι δ' ἄξιον· ἀποδείξεσιν γὰρ ἱκαναῖς λαμβάνεται—τὸν γὰρ ἥλιον ὅλον τῆς γῆς ὅλης μείζω διανοηθῆναι δυνατὸν ὀρθῶς, καὶ πάντα δὴ τὰ φερόμενα ἄστρα θαυμαστόν τι μέγεθος ἔχει. λάβωμεν δὴ τίς τρόπος ἂν εἴη τοσοῦτον περιφέρειν ὄγκον τινὰ φύσιν τὸν αὐτὸν ἀεὶ χρόνον, ὅσον καὶ νῦν περιφέρεται. θεὸν δή φημι τὸν αἴτιον ἔσεσθαι, καὶ οὔποθ' ἑτέρως εἶναι δυνατόν· ἔμψυχον μὲν γὰρ οὔποτε γένοιτ' ἂν ἑτέρᾳ πλὴν διὰ θεόν, ὡς ἡμεῖς ἀπεφηνάμεθα. ὅτε δὲ τοῦτο οἷός τέ ἐστιν θεός, ἅπασα αὐτῷ ῥᾳστώνη γέγονεν τοῦ πρῶτον μὲν ζῷον γεγονέναι πᾶν σῶμα καὶ ὄγκον σύμπαντα, ἔπειτα, ᾗπερ ἂν διανοηθῇ βέλτιστα, ταύτῃ φέρειν.

According to Aristotle the spherical shape of the heavenly bodies (**τὰ σχήματα**) may be deduced from the sphericity of the moon, which can perceived by sight: see

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[1] Rather than "the views" (R-F).

[2] See Arist. *Cael.* 298 a 15 ff.; Dicks (1970) 242 n. 210.

Arist. *Cael.* 291 b 19-23 ἔτι δ' ὁμοίως μὲν ἅπαντα καὶ ἕν, ἡ δὲ σελήνη δείκνυται διὰ τῶν περὶ τὴν ὄψιν ὅτι σφαιροειδής· οὐ γὰρ ἂν ἐγίνετο αὐξανομένη καὶ φθίνουσα τὰ μὲν πλεῖστα μηνοειδὴς ἢ ἀμφίκυρτος, ἅπαξ δὲ διχότομος. καὶ πάλιν διὰ τῶν ἀστρολογικῶν, ὅτι οὐκ ἂν ἦσαν αἱ τοῦ ἡλίου ἐκλείψεις μηνοειδεῖς. ὥστ' εἴπερ ἓν τοιοῦτον, δῆλον ὅτι καὶ τἆλλα ἂν εἴη σφαιροειδῆ.

For Aristotle the sphericity of the heavenly bodies may be assumed on *a priori* grounds as well:

Arist. *Cael.* 291 b 11-7 τὸ δὲ σχῆμα τῶν ἄστρων ἑκάστου σφαιροειδὲς μάλιστ' ἄν τις εὐλόγως ὑπολάβοι. ἐπεὶ γὰρ δέδεικται ὅτι οὐ πεφύκασι κινεῖσθαι δι' αὐτῶν, ἡ δὲ φύσις οὐδὲν ἀλόγως οὐδὲ μάτην ποιεῖ, δῆλον ὅτι καὶ σχῆμα τοιοῦτον ἀπέδωκε τοῖς ἀκινήτοις ὃ ἥκιστά ἐστιν κινητικόν. ἥκιστα δὲ κινητικὸν ἡ σφαῖρα[1] διὰ τὸ μηδὲν ἔχειν ὄργανον πρὸς τὴν κίνησιν. ὥστε δῆλον ὅτι σφαιροειδῆ ἂν εἴη τὸν ὄγκον.

In an astronomical context, **ἀποστάσεις** ("distances") seems to be a less technical term than the more usual ἀπόστημα (for which see e.g. Arist. *Cael.* 294 a 4, *Met.* 1073 b 33). The suffix -σις presents the distance as a 'desisting' on the part of some agent or subject.[2] E.g.

Vent. 30 κωλύονται δὲ καὶ οὗτοι (sc. the etesians) καὶ ὅλως πᾶς ἄνεμος πνεῖν ἢ διὰ τὴν ἀπόστασιν (οὐ γὰρ δύνανται διατείνειν εἰς τὸ πορρωτέρω διὰ τὸ μῆκος) ...

Arist. *Cael.* 290 a 13-8 ἔτι δὲ πάντα μὲν εὔλογον τὴν αὐτὴν κίνησιν κινεῖσθαι, μόνος δὲ δοκεῖ τῶν ἄστρων ὁ ἥλιος τοῦτο δρᾶν, ἀνατέλλων ἢ δύνων, καὶ οὗτος οὐ δι' αὑτὸν ἀλλὰ διὰ τὴν ἀπόστασιν τῆς ἡμετέρας ὄψεως· ἡ γὰρ ὄψις ἀποτεινομένη μακρὰν ἑλίσσεται διὰ τὴν ἀσθένειαν. Cp. also 292 a 16.

Ps.-Arist. *De Mundo* 397 b 30-3 διὸ γῆ τε καὶ τὰ ἐπὶ γῆς ἔοικεν, ἐν ἀποστάσει πλείστῃ τῆς ἐκ θεοῦ ὄντα ὠφελείας, ἀσθενῆ καὶ ἀκατάλληλα εἶναι καὶ πολλῆς μεστὰ ταραχῆς· οὐ μὴν ἀλλὰ καὶ καθ' ὅσον ἐπὶ πᾶν διικνεῖσθαι πέφυκεν τὸ θεῖον, κ.τ.λ.; see also *ad* διικνομένου 5 b 13, p. 225 above.

This aspect of remoteness may be relevant h.l., where astronomical research is advanced as the particular kind of study which went a long way starting from sense perception, but on the other hand does not go far enough for a full explanation of the cosmos.

καὶ ὅσα ἄλλα ἀστρολογία δείκνυσιν: such as the multitude of the spheres; see 5 a 21-3 above. In the present context ἀστρολογία stands in implicit contrast to the study of the first principles.[3]

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[1] *Contra* Plato, who ascribes this characteristic to the cube in *Tim.* 55 E 1 ff.; see HEATH (1913) 233.

[2] But without this connotation e.g. *HP* II.5.6, Arist. *Cael.* 290 b 22.

[3] For the absence of the article, see K-G II.1.606: "Die Abstrakta entbehren oft auch dann

Those who suppose that the cosmos has eternal existence, and thus assume some guarantee for its permanence, cannot leave off when having accepted considered opinions with regard to the heavenly bodies, notwithstanding the fact that this is an 'advanced' kind of knowledge: because of their belief in the permanence of the whole they should search for explanations outside the province of astronomy. (I.e., both the objects concerned and the study itself will transgress the limits of astronomy; the status of both objects and study will be discussed in the sequel.)

To these people it remains, then, to pronounce on (λέγειν) some further questions; for **κατάλοιπον ... λέγειν** compare

> *HP* IV.12.1 κατάλοιπον δὲ εἰπεῖν ὡσὰν ἐκ τοῦ γένους τούτου περὶ σχοίνου· καὶ γὰρ καὶ τοῦτο τῶν ἐνύδρων θετέον.

The first two items, separated from the ones that follow by λέγειν, coincide with the Aristotelian moving and final cause. The plural of **τὰ πρῶτα κινοῦντα** may be interpreted distributively as "the origin of movement in each case", so that this passage does not imply that Th. is an adherent of a theory which posits a plurality of 'unmoved movers'.[1]

The second issue requiring discussion, **τὸ τίνος ἕνεκα**, constitutes the interrogative counterpart of τὸ οὗ ἕνεκα (as seems to be appropriate with λέγειν; in fact it seems likely that with τὸ οὗ ἕνεκα Th. would have used εἰπεῖν). Cp. τίς ἡ φύσις ἑκάστου in 10 a 2, instead of τὴν ἑκάστου φύσιν which would have been possible. The subject implied is either, quite generally, the cosmos/being as such, or, corresponding to the object implied in τὰ πρῶτα κινοῦντα,[2] the heavenly bodies and their movements.[3]

Here again the question is urgent from an Aristotelian point of view in particular; the next three questions, which follow λέγειν, seem to reflect Th.'

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des Artikels, wenn sie in einer bestimmte Beziehung auftreten oder eine konkrete Bedeutung annehmen, so besonders die Namen der Künste und Wissenschaften.", with the examples Xen. *Econ.* 6.8 ἐδοκιμάσαμεν ἀνδρὶ καλῷ τε κἀγαθῷ ἐργασίαν εἶναι καὶ ἐπιστήμην κρατίστην γεωργίαν. ("wo [Dindorf] mit Unrecht τὴν zugefügt hat"); Plato *Symp.* 187 A 1 ἥ τε οὖν ἰατρική, ὥσπερ λέγω, πᾶσα διὰ τοῦ θεοῦ τούτου κυβερνᾶται, ὡσαύτως δὲ καὶ γυμναστικὴ καὶ γεωργία· μουσικὴ δὲ ... κατὰ ταὐτὰ ἔχει ("ἡ ἰατρική in Beziehung auf das Vorhergehende").

[1] For which see Arist. *Met.* XII.8, 1073 a 14 – 1074 a 31. Nor does it imply anything about Aristotle, as Skemp (1979) 244 apparently assumes: "Theophrastus' *Metaphysics* (especially 10a1-10) suggests that he [i.e, Aristotle] never sought to avoid (or never succeeded in avoiding) the metaphysical embarrassment of the plurality of movers of celestial spheres. Perhaps this is to be regarded as creditable obedience to what he thought to be observed fact."

[2] On the plural see above.

[3] Cp. R-F: "what they aim at", where 'they' seems to refer to the heavenly bodies (see their commentary *ad* 10 a 4). *Contra* L-M: "la cause finale".

own sphere of interest rather. Each of them is more comprehensive than the last.

For **τίς ἡ φύσις ἑκάστου**, see *ad* λέγειν, above. In view of καὶ ὑποβαίνοντι κ.τ.λ., at first sight ἑκάστου seems to refer to the objects of astronomy. However, taking into account the way of phrasing and its correspondance to the final paragraph of our treatise in particular[1] I submit that we should interpret "each object". Therefore it might be supposed that καὶ ὑποβαίνοντι κ.τ.λ. was added with a view to emphasizing the requirement of a complete account which was the point of replacing ἁπάντων by ὧν οὐκ ἔστιν οὐδὲ πέφυκεν in 9 b 21-4 above.

For ἡ φύσις see *ad* 4 a 17, p. 101 above.

(τίς) **ἡ πρὸς ἄλληλα θέσις** inquires after the relative position of constituent parts which make up a whole: compare

Sens. 73 (about atoms): τὰ ⟨δὲ⟩ ψαθυρὰ καὶ εὔθρυπτα ἐκ περιφερῶν μέν, λοξῶν δὲ τῇ θέσει πρὸς ἄλληλα[2] καὶ κατὰ δύο συζεύξει, τὴν δ' ὅλην τάξιν ἔχειν ὅτι μάλιστα ὁμοίαν.

Aristotle in his discussion of atoms graphically presents the distinction between θέσις, σχῆμα and τάξις:

Arist. *Met.* 985 b 17 διαφέρει γὰρ τὸ μὲν Α τοῦ Ν σχήματι τὸ δὲ ΑΝ τοῦ ΝΑ τάξει τὸ δὲ Ζ τοῦ Ν θέσει.

Compare

Sens. 60 Δημόκριτος μὲν οὖν οὐχ ὁμοίως λέγει περὶ πάντων, ἀλλὰ τὰ μὲν τοῖς μεγέθεσι τὰ δὲ τοῖς σχήμασιν ἔνια δὲ τάξει καὶ θέσει διορίζει.

In the present context the choice of θέσις seems to reflect an interest in the relation between the ingredients of the cosmos whether this involves order or not.[3] Compare

Vent. 37 ἔστι δὲ τὰ καθ' ἕκαστον (sc. ἄνεμον) ἴδια κατὰ τὴν ἑκάστου φύσιν καὶ θέσιν, ὧν τὰ μὲν τοῖς τόποις μερίζεται, καθ' οὓς καὶ πρὸς οὓς αἱ πνοαί, τὰ δὲ ταῖς ἀρχαῖς, ἀφ' ὧν, τὰ δὲ ἄλλοις τοιούτοις.

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[1] See ἐν τίσιν τὰ ὄντα καὶ πῶς ἔχει πρὸς ἄλληλα (12 a 1-2), τῇ τοῦ σύμπαντος οὐσίᾳ (11 b 26), τῆς τοῦ σύμπαντος θεωρίας (12 a 1).

[2] "placed oblique to one another" tr. Stratton.

[3] It may be noted that when reference would have been to the heavenly bodies τάξις would have been the more proper term—although with sperical objects both terms may seem to be coincident: see Arist. *Met.* 1073 b 32 Κάλλιππος δὲ τὴν μὲν θέσιν τῶν σφαιρῶν τὴν αὐτὴν ἐτίθετο Εὐδόξῳ, τοῦτ' ἔστι τῶν ἀποστημάτων τὴν τάξιν (τοῦτ' ... τάξιν om. E, del. Christ, Jaeger).

HP I.1.7 (said of the position of the parts of a plant:) τὸ δὲ μὴ ὁμοίως τῇ θέσει διαφέρει· λέγω δ' οἷον τὸ τοὺς καρποὺς τὰ μὲν ἐπάνω τὰ δ' ὑποκάτω τῶν φυλλῶν ἔχειν καὶ αὐτοῦ τοῦ δένδρου τὰ μὲν ἐξ ἄκρου τὰ δὲ ἐκ τῶν πλαγίων, ἔνια δὲ καὶ ἐκ τοῦ στελέχους, οἷον ἡ Αἰγυπτία συκάμινος, καὶ ὅσα δὴ καὶ ὑπὸ γῆς φέρει καρπόν, οἷον ... καὶ ἐπὶ τῶν ἀνθέων ὁμοίως· τὰ μὲν γὰρ περὶ αὐτὸν τὸν καρπὸν τὰ δὲ ἄλλως. ὅλως δὲ τὸ τῆς θέσεως ἐν τούτοις καὶ τοῖς φύλλοις καὶ ἐν τοῖς βλαστοῖς ληπτέον. Also I.13.3, IV.11.12.

CP I.11.5 ἐπεὶ καὶ ἡ θέσις διαφορὰν ποιήσει τῶν μερῶν (οἷον ἢ πρὸς ἀνατολὰς ἢ δύσεις, ἢ πρὸς ἄρκτον ἢ μεσημβρίαν)· ὥσπερ γὰρ καὶ ὅλων τῶν δένδρων, εἰ ἐν εὐδιεινῷ τόπῳ (πρωϊβλαστῆ γὰρ ταῦτα καὶ πρωίκαρπα).

HP V.3.6 τὰς ἶνας (sc. the fibres of palm-wood) δὲ οὐ δι' ὅλου ἔχει οὐδ' ἐπὶ πολὺ καὶ μακρὰς οὐδ' ὡσαύτως τῇ θέσει ἐγκειμένας πάσας ἀλλὰ παντοδαπῶς.

For **ἡ τοῦ σύμπαντος οὐσία**, the 'being' (or, 'essence') of the comprehensive whole, see 8 a 13, p. 366 above. The question is what kind of whole is concerned, i.e. how the individual objects make up the totality of the cosmos: cp. *ad* συναφή 4 a 9-10, and V.2 7 b 23 ff. above. Probably one should, in making the being of this whole explicit, have recourse to some analogy.

For the last two questions compare

149.3-10 FHS&G (= Simpl. *In Phys.*, *Corollarium de loco* 639.15-22 Diels) μήποτε οὐκ ἔστι καθ' αὐτὸν οὐσία τις τόπος, ἀλλὰ τῇ τάξει καὶ θέσει τῶν σωμάτων λέγεται κατὰ τὰς φύσεις καὶ δυνάμεις; ὁμοίως δὲ καὶ ἐπὶ τῶν ζῴων καὶ φυτῶν καὶ ὅλος τῶν ἀνομοιομερῶν εἴτε ἐμψύχων εἴτε ἀψύχων, ἔμμορφον δὲ τὴν φύσιν ἐχόντων. καὶ γὰρ τούτων τάξις τις καὶ θέσις τῶν μερῶν ἐστι πρὸς τὴν ὅλην οὐσίαν. διὸ καὶ ἕκαστον ἐν τῇ αὐτοῦ χώρᾳ λέγεται τῷ ἔχειν τὴν οἰκείαν τάξιν, ἐπεὶ καὶ τῶν τοῦ σώματος μερῶν ἕκαστον ἐπιποθήσειεν ἂν καὶ ἀπαιτήσειε τὴν ἑαυτοῦ χώραν καὶ θέσιν.[1]

For **καὶ ... δή** compare e.g.

Arist. *EN* 1163 b 22 οἷς δ' ὀφείλεται, ἐξουσία ἀφεῖναι· καὶ τῷ πατρὶ δή.

[Th.] *Char.* praef. 5 καὶ τὰ ἄλλα δὴ τῶν παθημάτων, ὥσπερ ὑπεθέμην, πειράσομαι κατὰ γένος φανερὰ καθίσταναι.

The addition by means of καί reads as an afterthought, and may in fact be a later addition, for which the audience is prepared in the preceding paragraph (δή): see above. The construction is somewhat loose anyway, the dative case of **ὑποβαίνοντι** corresponding to τούτοις, but now in the singular referring to the individual investigator. The looseness of the addition appears also from

[1] See STEINMETZ (1964) 157; cp. SORABJI (1988) 151.

what would be, strictly speaking, the complement implied:[1] sc. κατάλοιπον λέγειν τίς ἡ φύσις ἑκάστου καὶ ἡ πρὸς ἄλληλα θέσις—but not, without loss of coherence, ἡ τοῦ σύμπαντος οὐσία.

ὑποβαίνειν perhaps constitutes the earliest example of this metaphorical use ("*coming down* to the details" LSJ s.v., referring to this passage), which was to become popular in later times: "in Neoplatonism, of the descent ... from the universal to the particular, from unity to plurality, or from eternity to the world" (*ibid.*).

καθ' ἕκαστον presumably with an implicit λέγειν (cp. 10 a 1-2): to state sc. the moving cause, that for the sake of which, the nature of the object, their position for each species (**τῶν εἰδῶν**) or, more properly, when speaking of a whole, for each constituent part (**ἢ μερῶν**), down to the less dignified forms of organic nature. Compare

> *HP* VI.1.2 ἔστιν αὐτῶν (sc. τῶν ἀγρίων sc. τῶν φρυγανικῶν) εἴδη καὶ μέρη πλείω, ἃ δεῖ διαιρεῖν καὶ τοῖς καθ' ἕκαστον γένος καὶ τοῖς ὅλοις εἴδεσι. μέγιστην δ' ἄν τις λάβοι διαφορὰν τῶν ὅλων γενῶν,[2] ὅτι τὰ μὲν ἀνάκανθα τὰ δὲ ἀκανθώδη τυγχάνει. πάλιν δ' ἑκατέρῳ τούτων πολλαὶ διαφοραὶ γενῶν καὶ εἰδῶν, ὑπὲρ ὧν καθ' ἑκάθερα πειρατέον εἰπεῖν.

ἄχρι[3] **ζῴων καὶ φυτῶν**: STEINMETZ (1964) 159 proposes to add ⟨καὶ ἀψύχων⟩ to complete the series as in τὰ ἐν ἀρχῇ καὶ ⟨τὰ⟩ ἑπόμενα, μέχρι ζῴων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων specifying τὰ ὑπὸ τὴν φύσιν in 9 a 13-5 above.

Where completeness of the account is not the main issue, the absence of an item that might have been named does not call for explanation. There may, however, be a point to it in this particular context: where the obligation to go beyond the heavenly bodies in one's account of the cosmos applies in

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[1] R-F assumes an even more detached construction: "and, coming down the scale, *to proceed* to the other things in the universe, taking each species or part by itself, until they come down to animals and plants." (italics added).
"Le passage du pluriel au singulier, bien que rude, pourrait être admis (...). Mais il est difficile alors de comprendre la logique de la progression.", L-M *ad loc.*

[2] "Here τῶν ὅλων γενῶν means the same as τοῖς ὅλοις εἴδεσι; and below γενῶν and εἰδῶν *both* refer to the smaller divisions called μέρη above", HORT *ad loc.*; cp. also KRAEMER (1973) 138-9.

[3] "ἄχρι cum apud optimos scriptores Atticos raro inveniatur non offendimus quod apud Aristotelem omnino non in usu sit, sed eo magis mirum est, apud Theophrastum satis multis locis adhiberi." EUCKEN (1866) 67; but "raro apud Ar legitur", BONITZ 131 a 56 s.v., referring to six passages from *HA*, and to quite some more passages from the pseudepigrapha.
TLG finds 19 occurrences of ἄχρι in Th., 13 of which occur in *HP* (out of which, again, 5 are found in book VII), against 86 instances of μέχρι (also in *HP*, but not in book VII). Cp. MUELLER (1874) 60-1.

particular to those who suppose the cosmos to be eternal (see 9 b 24 ff.), it is not surprising that the way downwards extends to those entities in which generation and destruction is most obvious (i.e., animate things) especially.

10 a 5-7 εἰ οὖν ἀστρολογία ... καὶ πρότερα.

εἰ PA Isḥāq; ἢ JCL.

For **εἰ οὖν**, οὖν coming to the point (sc. the question ἐν τίνι ποιητέον τὸν ὅρον, 9 b 19-20: see p. 465 above);[1] compare

> 716.100-2 FHS&G (= Porph. *In Cl. Ptol. Harmonica* 1.3) εἰ οὖν ὅσον πρόσω κινεῖται ὁ ὀξύς, τόσονδε περὶ πᾶν κινοῖτο ὁ βαρύς, οὐκ ἂν ἐλάττους κινοῖτο ἀριθμούς, ὅπερ κἀκ τῶν αὐλητικῶν δῆλον.
>
> 584A.213-4 FHS&G (= Porph. *De abst.* 23.1) εἰ οὖν οὔτε ταῦτα θυτέον οὔτε τὰ κακοποιά, πῶς οὐ φανερὸν ὅτι παντὸς μᾶλλον ἀφεκτέον καὶ οὐ θυτέον ἐστὶ τῶν λοιπῶν ζῴων οὐθέν;

In the present passage too εἰ seems to introduce a ground rather than a condition (approaching "since", rather than "if"), as might be inferred also from the use of οὐκ (ἐν τοῖς πρώτοις) instead of μή.[2] οὖν here without a δ(έ) dismissing previous considerations as less relevant now,[3] the connection with the preceding ὅσοι ... ὑπολαμβάνουσιν, ... τούτοις κατάλοιπον ... being fairly direct.

For the absence of the article see *ad* 9 b 27, pp. 468-9 (n. 3).[4]

συνεργεῖν (cp. 4 a 12) here with an implicit object: "contributes sc. to explanation/to our understanding of the cosmos". It follows from ὅσοι ... ὑπολαμβάνουσιν, ἔτι δὲ ... καὶ ὅσα ἄλλα ἀστρολογία δείκνυσιν, τούτοις κατάλοιπον ... (9 b 24 – 10 a 1) that an account of the cosmos is not complete once knowledge of the data of astronomy has been acquired. Since astronomy does contribute to our understanding of the cosmos (**μέν**), but does not provide knowledge of the first things (**δέ**), the boundaries of explanation have not been reached, and the first things must be of a different nature.

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[1] "post digressionem aliquam reditus ad superiorem cogitationum contextum significatur per particulam οὖν" (Bonitz 540 b 12 f. s.v.).

[2] Cp. K-G II.2.190.

[3] This holds especially since the remark about the requirement of a way downwards is likely to be parenthetical on different grouds as well. For δ' οὖν see e.g. εἰ δ' οὖν τῆς κυκλικῆς αἴτιον τὸ πρῶτον, οὐ τῆς ἀρίστης ἂν εἴη, 5 b 7 f.

[4] JCL read ἢ instead of εἰ, which might be just possible with a full stop after τῆς φύσεως, but fails to make explicit the way in which the following ἕτερα ... ἂν εἴη connects with the preceding.

οὐκ ἐν τοῖς πρώτοις ... τῆς φύσεως: sc. as indicated in 10 a 1-3. τὰ πρῶτα τῆς φύσεως[1] presumably coincide with τὰ πρῶτα καὶ νοητά (9 a 12) and τὰ ἄκρα καὶ πρῶτα (9 b 10).

With the present incorporation of τὰ πρῶτα as (the highest) part of nature we reach the core of the problem, that while the 'first things' are prior to the objects of astronomy and thus beyond the limits of nature, the cosmos is essentially in movement—so that it is unlikely that its primary constituents are of a non-physical, unmoved nature. The present context clarifies the difference between the opposition ἡ ὑπὲρ τῶν πρώτων θεωρία vs. ἡ τῆς φύσεως (sc. θεωρία) at the beginning of the treatise and the set of items found in its final paragraph (11 b 24 ff.), where, on the one hand, καὶ ἐν τῇ φύσει καὶ ἐν τῇ τοῦ σύμπαντος οὐσίᾳ seems to reflect the conviction that not everything is physical, while on the other hand the realm of τὰ νοητά is replaced by 'the being of the comprehensive whole', the whole being essentially in movement itself.[2] Owing to the requirement of a συναφή between the two realms, the first principles seem to be swallowed up, as it were, by a concept of φύσις which covers being as a whole.[3]

Predicative **ἕτερα**, without an indefinite prounoun, in first position indicates that the point is that the most authoritative things (τὰ κυριώτατα, i.e. τὰ πρῶτα under their functional aspect)[4] must be different in nature rather than that they merely must be found elsewhere. Their nature will be discussed in what follows. Compare

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[1] Cp. Plato *Ep.* VII 344 D 4-5 τὰ περὶ φύσεως ἄκρα καὶ πρῶτα, *ad* 4 a 2-3.

[2] See the next paragraph, 10 a 9 ff.

[3] *Contra* L-M, who go so far as to connect τῆς φύσεως with ἕτερα and read a semi-colon after οὐκ ἐν τοῖς πρώτοις δέ ("Si donc l'astronomie collabore [à cette connaissance], mais ne se situe pas dans [le domaine] des premiers [êtres], ce qui a la plus grande puissance sera autre que la nature et antérieur [à elle]", tr.): "La ponctuation habituelle rattache τῆς φύσεως à ἐν τοῖς πρώτοις, ce qui fait difficulté. "Les premiers êtres *de la nature*" ne peut désigner que les astres [apparently esp. in view of 11 b 13 below]. Or le contexte exclut cette interprétation, puisqu'il revient naturellement à l'astronomie de s'occuper de ces derniers. On attend qu'il s'agisse du premier principe. Ross n'hésite pas à interpréter l'expression ainsi (...). Mais cela suppose soit que l'on donne à φύσις un sens qu'il n'a pas dans l'opuscule (pour désigner l'ensemble de ce qui est, principes y compris), soit que l'on fasse de τῆς φύσεως un génitif objectif, l'expression τὰ πρῶτα τῆς φύσεως désignant "les principes (eux-mêmes non naturels) de la nature". Il est plus simple de faire dépendre le génitif de ἕτερα. L'opposition entre l'étude portant sur les premiers êtres et celle qui porte sur la nature, qui ouvre l'opuscule (...), est aussi plus nettement rappelée, au moment même où il s'agit de montrer combien il est difficile de tracer des limites strictes entre les disciplines." (*ad loc.*).

[4] This functional aspect in a way reflects that we are looking for objects which do account for the cosmos as it is, in contrast to the objects of astronomy; cp. the functional aspect with regard to astronomical *science* involved in συνεργεῖν.

CP I.18.4 ἐν γὰρ τῇ ἰδίᾳ φύσει τὰς διαφορὰς ἕκαστα τούτων ἔχοντα, δικαίως ἕτερ' ἂν λέγοιντο κατὰ τὸ εἶδος.

Along these lines the aspect of authority involved in **τὰ κυριώτατα** (cp. 4 b 5) is the ontological counterpart of the notion of συνεργεῖν in 10 a 6. The addition of **καὶ πρότερα** is informative (note its position after ἂν εἴη) when said of τὰ πρῶτα only if the point is that it is unclear what this 'being prior' involves: the question appears to be that, while they do not seem to be physical in kind, it is unclear what their status actually is: see next note.

10 a 7-9 καὶ γὰρ δὴ ... (ἢ οὐ πᾶς).

καὶ γὰρ δὴ introduces an appeal to some (more) obvious or familiar fact or observation as a confirmation of what was said in what precedes: compare

Plato *Prot.* 313 E 2 – 314 A 3 εἰ μὲν οὖν σὺ τυγχάνεις ἐπιστήμων τούτων τί χρηστὸν καὶ πονηρόν, ἀσφαλές σοι ὠνεῖσθαι μαθήματα καὶ παρὰ Πρωταγόρου καὶ παρ' ἄλλου ὁτουοῦν· εἰ δὲ μή, ὅρα, ὦ μακάριε, μὴ περὶ τοῖς φιλτάτοις κυβεύῃς τε καὶ κινδυνεύῃς. *καὶ γὰρ δὴ* καὶ πολὺ μείζων κίνδυνος ἐν τῇ τῶν μαθημάτων ὠνῇ ἢ ἐν τῇ τῶν σιτίων.

Tht. 203 B 2-5 καὶ πῶς τοῦ στοιχείου τις ἐρεῖ στοιχεῖα; *καὶ γὰρ δή*, ὦ Σώκρατες, τό τε σῖγμα τῶν ἀφώνων ἐστί, ψόφος τις μόνον, οἷον συριττούσης τῆς γλώττης· τοῦ δ' αὖ βῆτα οὔτε φωνὴ οὔτε ψόφος, οὐδὲ τῶν πλείστων στοιχείων.

584A.232-9 FHS&G (= Porph. *De abst.* 24.5) ἀλλ' οὐδὲ (should we sacrifice animals) χρείας τινὸς ἕνεκα τῶν ἀγαθῶν. ὁ γὰρ ἀδίκῳ πράξει τὸ παθεῖν εὖ θηρεύων ὕποπτός ἐστι μηδὲ εὖ παθὼν χάριν ἕξειν· ὥστ' οὐδ' ἐλπιζομένης εὐεργεσίας θυτέον ἐστὶ τοῖς θεοῖς ζῷα. *καὶ γὰρ δὴ* τῶν μὲν ἀνθρώπων λάθοι τις ἂν ἴσως τινὰ τοῦτο πράττων, τὸν δὲ θεὸν ἀμήχανον καὶ λαθεῖν. εἰ τοίνυν θυτέον μὲν τούτων τινὸς ἕνεκα, οὐθενὸς δὲ τούτων χάριν αὐτὸ πρακτέον, δῆλον ὡς οὐ θυτέον ἐστὶ ζῷα τὸ παράπαν τοῖς θεοῖς.

The most authoritative things, i.e. the principles of nature, are different from and prior to the objects of astronomy; for confirmation one should note that the method involved in the search for τὰ κυριώτατα[1] (**ὁ τρόπος** here appar-

[1] "Mais on peut aussi comprendre que l'astronomie soit dite ne pas entièrement relever d'une méthode physique, dans la mesure où la théorie du mouvement s'appuie sur la théorie du premier moteur. L'allusion viserait alors ceux des astronomes qui défendent la parfaite autonomie de leur discipline (...).", L-M *ad loc.*—but surely in this paragraph Th. is not concerned with astronomers as such but with those investigators who believe that the cosmos is eternal but do not extend their quest beyond the data of astronomy. Cp. also USENER (1861) 272-3, criticized by R-F, TRICOT, REALE (*ad loc.*).

As a matter of fact, whether one connects τῆς φύσεως in 10 a 6 with τοῖς πρώτοις or not (see above), the present passage strongly suggests that to Th. anyway astronomy is a part of physics; cp. Aristotle's question in *Phys.* 193 b 25-30 εἰ ἡ ἀστρολογία ἑτέρα ἢ μέρος τῆς φυσικῆς quoted *ad* 8 b 20-4 (p. 412).

ently sc. τῆς ζητήσεως)[1] is not 'physical', either (**καὶ** 10 a 8).[2] Notwithstanding the very different context, Th.' distinction between "an explanation from nature" and "an explanation from inventiveness"[3] in *CP* II seems to be relevant here:

> *CP* II.1.1 δυὸ ... μέρη ταῦτ' ἐστίν, τὸ μὲν ὥσπερ φυσικὸν καὶ αὐτόματον, τὸ δὲ τέχνης καὶ παρασκευῆς βουλομένης τὸ εἶναι εὖ. λόγος δ' ἀμφοῖν ἐστιν οὐχ ὁ αὐτός, ἀλλ' ὁ μὲν οἷον φυσικός, ὁ δὲ ἐπινοητικός, οὔτε γὰρ ἡ φύσις οὐθὲν μάτην, ἥ τε διάνοια βοηθεῖν θέλει τῇ φύσει.

The final step is made by νοῦς itself, and involves an intuition which is not (or not entirely, see below) based on our knowledge of the physical world: see 9 b 13-6; cp. 9 a 21-3; also 8 b 12-6.

The statement is qualified by the addition both of ὡς οἴονταί τινες and of ἢ οὐ πᾶς. With **ὡς οἴονταί τινες** Th. refers to the opinion of others for the non-physical nature of the quest for the first principles.[4] The reference is matter-of-fact, without any restriction such as γε, and perhaps οἴονται (instead of φασι) indicates that the addition is made not so much with polemical intent, but rather as a confirmation where proof is not to be expected. Compare

> *HP* IV.14.7 σχεδὸν δέ, ὥς τινες οἴονται, τὰ πλεῖστα τῶν νοσημάτων ἀπὸ πληγῆς γίνεται· καὶ γὰρ τὰ ἀστρόβλητα καλούμενα καὶ τὰ σφακελίζοντα διὰ τὸ ἀπὸ ταύτης εἶναι τῶν ῥιζῶν τὸν πόνον. οἴονται δὲ καὶ δύο ταύτας εἶναι μόνας νόσους· οὐ μὴν ἀλλὰ τοῦτό γ' οὐκ ἄγαν ὁμολογούμενόν ἐστι.

τινες is very likely to include Aristotle, perhaps to refer to him in particular: see e.g.

> Arist. *Met.* 1005 a 33 – b 2 ἐπεὶ δ' ἔστιν ἔτι τοῦ φυσικοῦ τις ἀνωτέρω (ἓν γάρ τι γένος τοῦ ὄντος ἡ φύσις), τοῦ (περὶ τὸ) καθόλου καὶ περὶ τὴν πρώτην οὐσίαν θεωρητικοῦ καὶ ἡ περὶ τούτων ἂν εἴη σκέψις· ἔστι δὲ σοφία τις καὶ ἡ φυσική, ἀλλ' οὐ πρώτη.

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[1] Cp. *ad* 9 a 11-5, pp. 430-1 above.

[2] In view of the parallelism between mode of being and mode of explanation it is unlikely that καί should be interpreted as "even" (*contra* R-F). For the expression of studying things φυσικῶς (i.e. by making use of arguments derived from our knowledge of the physical world) in Aristotle see Algra (1988) 116-23.

That Th. realizes that the study is not of an entirely 'logical' nature either is indicated by ἢ οὐ πᾶς, below.

[3] Tr. Einarson/Link; but note οἷον: "(so to speak) natural".

[4] The idea is not, then, that the people referred to do hold the method to be physical, in which case the negation probably would have preceded ὡς οἴονταί τινες: see *Ign.* 73 ἐξάπτεται δὲ ἀπό τε τῆς ὑέλου καὶ ἀπὸ τοῦ χαλκοῦ καὶ τοῦ ἀργύρου τρόπον τινὰ ἐργασθέντων, οὐχ, ὥσπερ Γοργίας φησὶ καὶ ἄλλοι δέ τινες οἴονται, διὰ τὸ ἀπιέναι τὸ πῦρ διὰ τῶν πόρων.

In that case, reference might have been to Strato of Lampsacus: see frr. 32-39 Wehrli, and Gatzemeier (1970) 142 ff.; or even to Epicurus?

Cael. 298 b 20 τὸ γὰρ εἶναι ἄττα τῶν ὄντων ἀγένητα καὶ ὅλως ἀκίνητα μᾶλλόν ἐστιν ἑτέρας καὶ προτέρας ἢ τῆς φυσικῆς σκέψεως.
Also *Met.* 1025 b 19.

ἢ οὐ πᾶς is apparently added on the authority of Th., who wants to do justice to the fact that a large part of the process leading up to an intuition with regard to the nature of the principles is by sense perception: see 8 b 10-6, 9 a 9 (τὰ δὲ διὰ τἄμφω), 9 b 8-16 (with commentary).

VIII.7 (10 a 9-21): *And yet, taking into account that movement is essential to the cosmos as such, it seems that the cosmic whole is of a 'physical' nature itself (so that the same would hold for the method of investigation). Analogy with an animal in any case suggests that the ultimate explanation of the movement of the cosmos would amount to merely recognizing the nature of the cosmos to be an entity with movement as its essence.*

The problem that, whereas (a) the study of the whole apparently is not entirely physical, (b) the cosmos as a whole, being in movement in accordance with its essence, does not accommodate non-physical entities, is somehow connected with the problem of the unmoved mover.

10 a 9-10 καίτοι ... τοῦ οὐρανοῦ.

καίτοι marks a turn towrds a problem[1] raised by the outcome of the preceding argument, viz. that there is unmistakably a non-physical side to the method of acquiring knowledge of the supreme entities—and thus something non-physical to the supreme entities themselves. **γε** singles out the relevant property, viz. the property which would suggest that the method of investigating the cosmos *is* φυσικός. The fact that movement is proper both to nature as such (**τό ... κινεῖσθαι καὶ ἁπλῶς τῆς φύσεως οἰκεῖον**)[2] and to the

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[1] Cp. ἡ νῦν ἀπορία 10 a 19-20. Compare, notwithstanding the evident difference in the valuation of the arguments involved (for which see *ad* 10 a 19-21), REALE's commentary *ad loc.*: "il passo ... ha la funzione di controbilanciare, a mo' di antitesi, la tesi prima sostenuta: che l' astronomia non coglie i principi supremi, i quali sono realtà che stanno al di sopra degli oggetti di cui essa si occupa; l' antitesi, facendo del moto del cielo la vita e l' essenza di esso, renderebbe inutile la ricerca di ulteriori cause, e, di conseguenza, renderebbe inutile un'altra scienza oltre l'astronomia."

Contra TRICOT *ad loc.*: "Th. précise que, dans la mesure où le Ciel est en mouvement, il est l'objet de l'étude de la Physique."; cp. also R-F.

[2] Cp. ἡ δὲ φύσις (ὡς ἁπλῶς εἰπεῖν) ἐν κινήσει καὶ τοῦτ' αὐτῆς τὸ ἴδιον 4 b 19-21. Of course, the association of φύσις (< φύεσθαι) with κίνησις comes natural to the Greek: see *ad* 4 b 20. That οἰκεῖος is conceived as implying an essential property appears from τῆς οὐσίας 10 a 11.

outermost region of the first heaven[1] in particular (**καὶ μάλιστα τοῦ οὐρανοῦ**) suggests that in its movement we just have the final account of the cosmos as such. For heaven as that constituent part of nature whose movement is most continuous and permanent cp. 6 a 12-5 with pp. 246 ff. Compare

> Arist. *Met.* 1050 b 22-8 διὸ ἀεὶ ἐνεργεῖ ἥλιος καὶ ἄστρα καὶ ὅλος ὁ οὐρανός, καὶ οὐ φοβερὸν μή ποτε στῇ, ὃ φοβοῦνται οἱ περὶ φύσεως. οὐδὲ κάμνει τοῦτο δρῶντα· οὐ γὰρ περὶ τὴν δύναμιν τῆς ἀντιφάσεως αὐτοῖς, οἷον τοῖς φθαρτοῖς, ἡ κίνησις, ὥστε ἐπίπονον εἶναι τὴν συνέχειαν τῆς κινήσεως· ἡ γὰρ οὐσία ὕλη καὶ δύναμις οὖσα, οὐκ ἐνέργεια, αἰτία τούτου.

For καὶ μάλιστα introducing the most significant member of some set, compare

> *Vent.* 60 οἱ δὲ ψυχροὶ ὄντες οἱ ἄνεμοι ξηραίνουσι καὶ θᾶττον ἢ ὁ ἥλιος θερμὸς ὤν, καὶ μάλιστα οἱ ψυχρότατοι, ταύτην ὑποληπτέον τὴν αἰτίαν, ὅτι ἀτμίδα ποιοῦσι.

On the one hand, then, the supposed eternity of the cosmos seems to require an ontological basis which is unaffected by movement; on the other hand movement seems to be characteristic of, and in fact to be the very essence[2] of the first heaven, and thus of the cosmos as such. The realm of noetic, non-moved being seems to be rather desolate. Compare

> Arist. *Met.* 1026 a 6-16 ὅτι μὲν οὖν ἡ φυσικὴ θεωρητική τίς ἐστι, φανερὸν ἐκ τούτων· ἀλλ' ἔστι καὶ ἡ μαθηματικὴ θεωρητική· ἀλλ' εἰ ἀκινήτων καὶ χωριστῶν ἐστί, νῦν ἄδηλον, ὅτι μέντοι ἔνια μαθήματα ᾗ ἀκίνητα καὶ ᾗ χωριστὰ θεωρεῖ, δῆλον. εἰ δέ τί ἐστιν ἀΐδιον καὶ ἀκίνητον καὶ χωριστόν, φανερὸν ὅτι θεωρητικῆς τὸ γνῶναι· οὐ μέντοι φυσικῆς γε (περὶ κινητῶν γάρ τινων ἡ φυσική), οὐδὲ μαθηματικῆς, ἀλλὰ προτέρας ἀμφοῖν. ἡ μὲν γὰρ φυσικὴ περὶ χωριστὰ μὲν ἀλλ' οὐκ ἀκίνητα, τῆς δὲ μαθηματικῆς ἔνια περὶ ἀκίνητα μὲν οὐ χωριστὰ δὲ ἴσως, ἀλλ' ὡς ἐν ὕλῃ· ἡ δὲ πρώτη καὶ περὶ χωριστὰ καὶ ἀκίνητα.

10 a 10-6 διὸ καὶ εἰ ... τοῦ παντός.

εἰ USENER (1890); ἢ MSS.
κινεῖται CBL; κινῆται PJA.

For **διὸ καί**, see *ad* 9 b 15, pp. 458-9. What may be inferred from the nature of the οὐρανός as the primary constituent of nature follows in 10 a 13 ff.: δῆλον ὅτι κ.τ.λ.

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[1] For the problems involved in rendering ὁ οὐρανός in this passage see *ad* 9 b 24.
[2] See *ad* τῆς οὐσίας 10 a 11, below.

εἰ is USENER's correction for MSS. ἤ, which deprives διὸ καί of any sense and results in an asyndeton when we reach δῆλον ὅτι (10 a 13).

As appears from καθάπερ ἐν τοῖς ζῴοις καὶ φυτοῖς in 10 a 12-3, εἰ ... κινεῖται[1] presents a condition for what follows rather than a hypothesis.[2] The argument relies on the character of ἐνέργεια as some kind of κίνησις.[3] The transition from κίνησις as 'proper to' ἡ φύσις to its being an essential property of nature and its ingredients proceeds through the (Aristotelian) association of ἐνέργεια with essence and form.

For the relation between οἰκεῖος and 'being of the essence' (**τῆς οὐσίας**) compare

> *CP* IV.8.4 φαίνεται δὲ συνεργεῖν πως τῇ γενέσει (ἡ ἅλμη, the brine), καὶ οἰκεῖον εἶναι· σημεῖον δ', ὅτι καὶ οἱ πρὸς τῇ θαλάττῃ βελτίους γίνονται, καὶ ὅτι καταπλυθείσης τῆς ἅλμης ἀπόλλυται καὶ ἐκζῳοῦται· δι' ἣν δ' αἰτίαν μόνον τούτῳ, σκεπτέον· εἰ μὴ ἄρα τῆς οὐσίας ("The reason why brine does this in chickpea alone among legumes must be investigated, unless the brine is part of the plant's nature", tr. EINARSON/LINK).

On the one hand, therefore, the argument that κίνησις is 'of the essence' of each entity partly rests on the fact that 'activity' can also refer to the formal aspect of an entity; on the other hand, the argument is indeed legitimate on the assumption that ἐνέργεια is some superior kind of κίνησις, as was suggested in 7 b 13 ff.

In fact, this relation between κίνησις and ἐνέργεια is made explicit by the addition of a second condition on which the conclusion that the οὐρανός is in rotation according to its essence applies. **καὶ** (εἰ) **τὸ καθ' ἕκαστον ὅταν ἐνεργῇ καὶ κινεῖται** calls attention to the dynamic aspect of ἐνέργεια (as it were) not only by the inference made, but also by the use of the verb.

As has been noted *ad* 7 b 13 ff., this from an Aristotelian point of view far-reaching inference conflicts with the testimony according to which Th. made a distinction between these two terms, saying that εἶναι ... τὴν μὲν κίνησιν καὶ ἐνέργειαν ὡς ἂν ἐν αὐτῇ περιεχομένην, οὐκέτι μέντοι καὶ τὴν ἐνέργειαν κίνησιν (152.2-3 FHS&G, p. 338 n. 1 above).

κίνησις, as appears from the examples given (**καθάπερ ἐν τοῖς ζῴοις καὶ φυτοῖς**), is used in the widest sense, including not only locomotion but also

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[1] κινῆται, which is the reading of most manuscripts, would force us to read τὸ καθ' ἕκαστον (sc. τῆς οὐσίας ἑκάστου)—which, of course, makes no sense.

[2] *Contra* ELLIS (1987) 219.

[3] Cp. *ad* 7 b 9-15, esp. pp. 337-8 above.

vegetative processes[1] as the response of the nutritive faculty to meteorological phenomena; see e.g.

> *CP* I.7.2 ἅ (i.e., the seeds) γὰρ δοκεῖ ξηρὰ καὶ ὥσπερ κελυφανώδη πάμπαν, οἷα τὰ τῶν λαχάνων, ταῦτα κινεῖται κατὰ τὰς οἰκείας ὥρας, ἐὰν καὶ ὁτιοῦν ἰκμάδος λάβῃ ...
>
> I.7.4 ἔχουσι δέ τινων τὰς ζωτικὰς ἀρχὰς (...) καὶ ῥίζαι καὶ ἀκρεμόνες καὶ ξύλα καὶ καυλοὶ χωριζόμενοι τῶν φυτῶν, ὥστε κινεῖ καὶ μέχρι τοῦ βλαστάνειν, οἷον ...
>
> I.7.5 ἡ δὲ βλῆχρος ("pennyroyal") ξηρὰ φαίνεται παντελῶς, ἀλλὰ δῆλον ὡς ἔχει τινὰ τοιαύτην ἀρχήν, ᾗ κινεῖται τῇ τοῦ ἀέρος ἅμα μεταβολῇ καὶ ἀλλοιώσει.
>
> I.12.5 ἐπεὶ καὶ ἄτοπον εἰ τὸ θρεπτικόν, ὃ δὴ διαπλάττει καὶ δίδωσιν τροφάς, διαιρεῖται κατὰ μέρη τὴν ἐνέργειαν, ἢ πάλιν εἴ τι τῶν σωματικῶν τὸ ἐνεργοῦν οἷον πνεῦμα ἢ πῦρ, οὐδὲ γὰρ ταῦτα εἰκός· ἀλλ' ὅταν ἅμα ταῖς ὥραις *κινηθῶσιν*, ὁμοίως δι' ὅλων διήκειν τῶν φυτῶν.
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> Arist. *DA* 413 a 20-31 λέγομεν οὖν, ἀρχὴν λαβόντες τῆς σκέψεως, διωρίσθαι τὸ ἔμψυχον τοῦ ἀψύχου τῷ ζῆν. πλεοναχῶς δὲ τοῦ ζῆν λεγομένου, κἂν ἕν τι τούτων ἐνυπάρχῃ μόνον, ζῆν αὐτό φαμεν, οἷον νοῦς, αἴσθησις, κίνησις καὶ στάσις ἡ κατὰ τόπον, ἔτι *κίνησις ἡ κατὰ τροφὴν καὶ φθίσις τε καὶ αὔξησις*. διὸ καὶ τὰ φυόμενα πάντα δοκεῖ ζῆν· φαίνεται γὰρ ἐν αὐτοῖς ἔχοντα δύναμιν καὶ ἀρχὴν τοιαύτην, δι' ἧς αὔξησίν τε καὶ φθίσιν λαμβάνουσι κατὰ τοὺς ἐναντίους τόπους· οὐ γὰρ ἄνω μὲν αὔξεται, κάτω δ' οὔ, ἀλλ' ὁμοίως ἐπ' ἄμφω καὶ πάντῃ, ὅσα ἀεὶ τρέφεταί τε καὶ ζῇ διὰ τέλους, ἕως ἂν δύνηται λαμβάνειν τροφήν.

εἰ δὲ μὴ sc. κινεῖται: if an entity referred to as "animal" or "plant" were not in movement, it might be a picture[2] of an animal or plant, with the same name (**ὁμώνυμα**) as a real animal or plant but not with the same definition: cp. Arist. *Met.* 1036 b 29 (τὸ ζῷον) ἄνευ κινήσεως οὐκ ἔστιν ὁρίσασθαι. Compare

> *CP* I.22.1 τὰ ... θήλεα τῶν δένδρων πολὺ καρπιμώτερα μέν, ἧττον δὲ θερμὰ τῶν ἀρρένων (ὥσπερ ἐκ τῆς τῶν ζῴων ὁμοιότητος ληπτέον κἂν ᾖ ὁμώνυμον). Cp. also I.18.3 ἔοικεν ὥσπερ ἐν ὁμωνυμίᾳ γίνεσθαι τὸ ἀπόρημα.

Since the οὐρανός is a component part of the φύσις[3] and as such may be conceived as an individual entity not essentially different from the other enti-

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[1] Cp. also οἷον ... ζωή τις, below.

[2] Reale *ad loc.* appropriately refers to Arist. *Cat.* 1 a 1-4 ὁμώνυμα λέγεται ὧν ὄνομα μόνον κοινόν, ὁ δὲ κατὰ τοὔνομα λόγος τῆς οὐσίας ἕτερος, οἷον ζῷον ὅ τε ἄνθρωπος καὶ τὸ γεγραμμένον· τούτων γὰρ ὄνομα μόνον κοινόν, ὁ δὲ κατὰ τοὔνομα λόγος τῆς οὐσίας ἕτερος ... "L'esempio, qui, è particolarmente indicativo: 'uomo' e 'uomo dipinto', sono animali per pura omonimia, perchè il primo è vivente, etc., il secondo è morta immagine."

[3] See p. 477.

ties whose being implies ἐνέργεια, and taking into account that if a thing has ἐνέργεια, then it has κίνησις, it is clear that the οὐρανός, too (**κἄν**),[1] will be in movement (sc. its particular kind of movement, rotation) in accordance with its essence (**ἐν τῇ περιφορᾷ κατὰ τὴν οὐσίαν**). Cp. 6 a 7-8 πότερον ἡ περιφορὰ τῆς οὐσίας ἐστὶν αὐτοῦ (sc. τοῦ πρώτου οὐρανοῦ).

χωριζόμενος δὲ καὶ ἠρεμῶν is parallel to "εἰ δὲ μή" in 10 a 13: separated from its essential κίνησις, i.e. περιφορά, and thus at rest, heaven would be heaven in name only. In analogy with what was said with regard to ὁμώνυμα above, such an 'οὐρανός' might be a diagram (ὑπογραφή) or a globe as referred to e.g. in Arist. *Meteor.* 346 a 32-3 θεωρείσθω δ' ὅ τε κύκλος καὶ τὰ ἐν αὐτῷ ἄστρα ἐκ τῆς ὑπογραφῆς, or as described in

> Sch. *ad* Arat. *Phaen.* 248, 198.7-13 Martin ὁ ἀριστερὸς ὦμος τῆς Ἀνδρομέδας λαμπρός ἐστιν, ἐξ οὗ διδάσκει τὸν ἀμυδρὸν Ἰχθύν. ὁ δὲ ἀριστερὸς ὦμος Ἀνδρομέδας πλησιάζει τῷ Ἰχθύι ἐν τῇ *σφαιρογραφίᾳ*, τῷ δεξιῷ δὲ *τῇ οὐρανοθεσίᾳ*. ἐμπέπηγε γὰρ ἐπ' ὄψιν τῷ οὐρανῷ τὰ ζῴδια, καὶ τὰ νῶτα αὐτῶν ἡμεῖς ὁρῶμεν. οὐ γὰρ δύνατον ἐν τῇ σφαίρᾳ γραφῆναι οὕτως· οὐ γὰρ ἂν ἑωρῶμεν.

The purport is further explained by the following οἷον γὰρ ζωή τις κ.τ.λ. For a **γάρ**-clause following a διὸ καί-clause, compare

> *Od.* 62 διὸ καὶ ὡς πρῶτον αἴτιον ἡ διάθεσις· τότε γὰρ καὶ οἱ μὴ ὀχεύοντες ὄζουσι καὶ οἱ ἄγονοι καὶ αἱ αἶγες ὅλως.

Since the οὐρανός is an individual, to be compared with animals or plants, its essential movement can be characterized as a kind of life (**ζωή τις**) although the term is used more properly in the case of these entities (**οἷον**).[2]

For **ἡ περιφορὰ τοῦ παντός** cp. ἡ τοῦ ὅλου περιφορά 10 b 27-8. The variety of application of ὁ οὐρανός smoothes the transition to τὸ πᾶν (see *ad* 9 b 24); the explicit presentation of ὁ οὐρανός (heaven) as constituting a part of the cosmos like other individual entities above paved the way for the picture of (ὁ οὐρανός in the sense of) the universe as an (all-embracing) living being.

10 a 16-9 ἆρ' οὖν ... ἀφωρισμένον;

ἆρ' οὖν introduces a leading question: cp. 584A.207 FHS&G (= Porph. *De abst.* 23.1) ἆρ' οὖν θυτέον τὰ ἄξια τοῦ σφάττεσθαι τοῖς θεοῖς; καὶ πῶς, εἴ γε φαῦλα τὴν φύσιν ἐστίν;

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[1] "ipsum κἄν non sequente εἰ ita usurpatur, ut a simplice καί vix distinguatur", BONITZ s.v. ἄν 41 a 36-7; LSJ s.v. κἄν I: "freq[uently] when καί is intens[ive]".

[2] See *ad* 4 a 10, p. 85.

εἴ γε presents a case in point ("seeing that ..."); compare

> *CP* II.13.1 ἰσχυρὸν δ' ἡ τροφὴ πρὸς ὁμοίωσιν, εἴ γε καὶ ἐν τοῖς ζῴοις οὕτως ἡ τοῖς θήλεσιν ὁμοιότης.
> *Od.* 58 βρέχουσι δὲ συντιθέντες τῷ οἴνῳ τῷ εὐώδει· ἔοικε δ' οὖν χρήσιμος εἶναι πρὸς τὰς εὐοσμίας, εἴ γε καὶ οἱ μυρεψοὶ ("perfumers") χρῶνται.

ζητητέον here with τὴν ζωήν and τὴν φοράν as a direct object ("seek sc. to explain"), as if involving some sort of prolepsis (τὴν ζωὴν ... ζητητέον ⟨πῶς ἔστιν⟩, or ⟨τίς ἡ αἰτία αὐτῆς⟩—or the like); cp. *CP* I.11.8 ἀλλ' ἐκεῖνο μᾶλλον ζητητέον· τίς ἢ πόθεν ἡ κρᾶσις καὶ ἡ σύστασις τῶν τοιούτων· ...

The position of ἢ ὡδί seems to indicate that **ἢ** is used as after a comparative with the negation μηδέ; likewise ἢ (τρόπον τινα ἀφωρισμένον) with οὐδέ:[1] cp. *Vent.* 25 ἀπὸ μόνου δὲ τοῦ Νείλου δοκοῦσιν οὐκ ἀποπνεῖν αὖραι ἢ ἐλάχισται ...

ὡδί ("in this way") could refer backwards, sc. as being 'of the essence' of each particular ζῷον; in view of the parallel τρόπον τινὰ ἀφωρισμένον, however, it is more likely that it should be interpretated as "in a particular way"; compare

> Arist. *Met.* 1036 b 23-4 ἔνια γὰρ ἴσως τόδ' ἐν τῷδ' ἐστίν, ἢ ὡδὶ ταδὶ ἔχοντα ("for some things surely are a particular form in a particular matter, or particular things in a particular state" *RevOT*).

For ἀφωρισμένον "distinct", "particular", "specific", "special" compare e.g.

> Arist. *Rhet.* 1354 a 3 ἡ ῥητορική ἐστιν ἀντίστροφος τῇ διαλεκτικῇ· ἀμφότεραι γὰρ περὶ τοιούτων τινῶν εἰσιν ἃ κοινὰ τρόπον τινὰ ἁπάντων ἐστὶ γνωρίζειν καὶ οὐδεμιᾶς ἐπιστήμης ἀφωρισμένης.
> *HP* I.6.2 ἔχει δὲ τὴν μήτραν ("bark") τὰ μὲν μεγάλην καὶ φανεράν, ὡς πρῖνος δρῦς καὶ τἆλλα προειρημένα, τὰ δ' ἀφανεστέραν, οἷον ἐλάα πύξος· οὐ γὰρ ἔστιν ἀφωρισμένην οὕτω λαβεῖν, ἀλλὰ καί φασί τινες οὐ κατὰ τὸ μέσον ἀλλὰ κατὰ τὸ πᾶν ἔχειν· ὥστε μὴ εἶναι τόπον ὡρισμένον· δι' ὃ καὶ ἔνια οὐδ' ἂν δόξειεν ὅλως ἔχειν· ἐπεὶ καὶ τοῦ φοίνικος οὐδεμία φαίνεται διαφορὰ κατ' οὐδέν.

On either case the point is that no other explanation is necessary than that the animal is endowed with life in virtue of its essential nature; see *ad* ἐνέργεια 10 a 11. An analogous situation then seems to apply to the heaven and the heavenly bodies: *given the essence of the heaven*, it is in rotation as well.

Cp. Arist. *MA* 700 a 31-2 ὥσπερ δ' ἐν τῷ ὅλῳ, καὶ ἐν τῷ ζῴῳ κίνησις πρώτη αὕτη, ὅταν τελεωθῇ ("in the completed creature" tr. NUSSBAUM). The analogy breaks down insofar as in the case of the cosmos (ὁ οὐρανός = τὸ

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[1] See K-G II.304 A.4.

πᾶν) there is no generation[1] and no imperfect stage prior to its being, and in sofar as there is nothing outside heaven; compare

Arist. *MA* 699 a 24-7 ὅτι μὲν οὖν ἔχει τι καὶ πρὸς τὴν ὅλην φύσιν οὕτως ὥσπερ ἡ γῆ πρὸς τὰ ζῷα καὶ τὰ κινούμενα δι' αὐτῶν, ἐκ τῶν τοιούτων ἄν τις διαπορήσειεν.

To make the most of the analogy between cosmos and ζῷον, and of the special way in which it should be accounted for, one might suppose the cosmos too to be endowed with (an analogon of) soul:[2] compare

159.27-32 FHS&G (= Proclus *In Tim.* 35 A) ... ὁ μὲν Θεόφραστος εἰκότως ἀρχὴν κινήσεως τὴν ψυχὴν εἰπὼν οὐδὲν ἄλλο πρὸ αὐτῆς ὑποθέμενος, ἀρχῆς οὐκ οἴεται δεῖν ἀρχὴν ἐπιζητεῖν· ἔμψυχον γὰρ καὶ αὐτὸς εἶναι δίδωσι τὸν οὐρανὸν καὶ διὰ τοῦτο θεῖον· εἰ γὰρ θεῖός ἐστί, φησί, καὶ τὴν ἀρίστην ἔχει διαγωγήν, ἔμψυχός ἐστιν· οὐδὲν γὰρ τίμιον ἄνευ ψυχῆς, ὡς ἐν τῷ Περὶ οὐρανοῦ γέγραφεν.

10 a 19-21 συνάπτει δέ ... κίνησιν.

συνάπτειν πρός τι " to (be) connect(ed) with", see *ad* 4 a 9-10, 4 b 2. The use of the term, again, testifies to the parallelism between reality and knowledge.[3] Compare

CP IV.12.2 ὑπὲρ δὴ τούτων, καὶ εἴ τι ἄλλο συνάπτει πρὸς τὴν ἀπορίαν ταύτην, πρῶτον ἐκεῖνο λεκτέον· ...
Arist. *Pol.* 1276 a 7 περὶ δὲ τοῦ δικαίως ἢ μὴ δικαίως συνάπτει πρὸς τὴν εἰρημένην πρότερον ἀμφισβήτησιν.

Both **πως** and **καί**, and in fact συνάπτει itself, indicate that the ἀπορία referred to is not more or less the same as that concerning the unmoved cause of movement, so that the text does not refer to the problem of the special

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[1] This seems to be, again, why the problem discussed here confronts those who assume the cosmos to be eternal in particular: see 9 b 24-5.

[2] One just might compare Xenocr. Fr. 198, p. 127.17-23 IP (= Philop. *In De An.* 168.2-7) ὥστε εἰ τῶν ἀτόμων καὶ τῶν ἀριθμῶν οἱ μὲν κινοῦσιν, οἱ δὲ κινοῦνται, ἔσται μὲν τὸ ὅλον σύστημα αὐτοκίνητον, ὥσπερ καὶ τὸ ὅλον ζῷον λέγεται αὐτοκίνητον, καίτοι τοῦ μὲν κινοῦντος τοῦ δὲ κινουμένου, ἀλλ' ὥσπερ ἐν ζῴῳ τὸ κινοῦν ἡ ψυχὴ καὶ οὐ τὸ κινούμενον, οὕτω καὶ ἐπὶ τοῦ τῆς ψυχῆς ἀριθμοῦ οὐ πᾶς ἔσται ψυχὴ ἀλλ' αἱ κινοῦσαι μονάδες· ...

[3] *Contra* LAKS (1988) 251 n. 44: "The occurrence of *sunaptein* at 10a19 is trivial, except that the use of the term for the connection between two textual elements ([the present sentence] referring to an earlier passage, 6a5ff.) suggests that Theophrastus may have wished to find a counterpart to Aristotle's metaphor of the episode, by conceiving of the connection of the principles and what they are the principles of on the basis of the model of literary composition."

kind of explanation of the movement of the cosmos raised by the previous sentence.[1] I submit that **ἡ νῦν ἀπορία** refers to the problem indicated by καίτοι in 10 a 9, that (a) although the 'first things of nature' are prior to the objects of astronomy and thus apparently beyond the realm of physics, such in agreement with the fact that their science is not of an entirely physical nature, (10 a 5-9), (b) there seems to be little room for the non-physical, since the cosmos as a whole, which is τὸ πᾶν or "all there is", is essentially in movement (10 a 9-19).[2] The connection of this problem with the movement that occurs under the influence of the unmoved entity (**ὑπὸ τοῦ ἀκινήτου**)[3] seems to be that there too it is unclear how something primary is distinct from what it is supposed to be prior to: cp. ἐπεὶ τό γε διὰ τοῦτ' ἠρεμεῖν ὡς ἀδύνατον ἀεὶ κινούμενον εἶναι τὸ κινοῦν (οὐ γὰρ ἂν εἴη πρῶτον) κίνδυνος μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον, ἀλλὰ μείζω τινὰ αἰτίαν ζητεῖ. δοκεῖ δὲ καὶ ἡ αἴσθησις τρόπον τινὰ συναυδᾶν ὡς ἐνδεχόμενον μὴ ἀεὶ τὸ κινοῦν ἕτερον εἶναι καὶ ὃ κινεῖ (7 b 15-21 above).

Finally, if the ἀπορία consists in the combination of (1) the requirement of some 'first' entity outside the domain of physics, to be known by a method which is not entirely physical, and (2) the essentially physical nature of the 'all', these two passages do not stand in a relation of thesis and antithesis, at least not in the sense that the latter "ha la funzione di controbilanciare, a mo' di antitesi, la tesi prima sostenuta" (REALE *ad loc.*).[4]

Even less can it be maintained that both parts that make up the ἀπορία as well as the considerations leading up to them are "noncommittal", as ELLIS (1988) 219-220 has it. If they were, there would be no ἀπορία at all.

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[1] *Contra* R-F: "i.e. the problem of why [?] the heavens and the heavenly bodies have movement connects with the problem previously raised about the movement imparted by the ἀκίνητον, in discussing which T. had made the same suggestion, that revolution is of the very essence of the heavens (6ᵃ 7-9)" (*ad loc.*).

[2] Cp. Arist. *Top.* 104 b 14 ff. ἀπορίαν ἔχει πότερον οὕτως ἔχει ἢ οὐχ οὕτως περὶ ἀμφοτέρων εἶναι λόγους πιθανούς. Cp. also 145 b 18-20.

[3] For the concrete, or physical way of phrasing cp. ὑπὸ τῆς κυκλικῆς περιφορᾶς 5 b 24-5.

[4] Distorted by CATAN into "which has the function of counterbalancing an antithetical moment, the thesis which was first sustained" (REALE/CATAN 420)—also *apud* ELLIS (1988) 218. (In the same sentence "l'astronomia non coglie i principi supremi" is rendered as "astronomy does not unite the supreme principles".)

CHAPTER NINE

IX.1 (10 a 22 – 11 a 1): *It is not easy to determine how far one should go in maintaining that an entity is such and such for some reason. This difficulty concerns not only the beginning and the end of the chain of teleological causation* per se, *but also the fact that some entities apparently resist teleological explanation. Some phenomena seem to be as they are by coincidence or by some necessity, both in the celestial and in the sublunary region (where this actually holds for the majority of things).*

For instance in the field of meteorology, in the case of fluctuations and sudden changes it is obscure what these are for; in fact such phenomena fit in badly with a kind of explanation according to which one might expect things to develop uniformly in one direction. A further problem are phenomena with regard to animals which do not seem to serve a purpose, which are harmful to the animal in question, or even against its nature.

The most significant example is offered by the various phenomena connected with nutrition and generation of animals; the very diversity to be observed suggests that these phenomena are not for the sake of nutrition and generation (or for anything else); rather they are somehow connected with the movements of the heavenly bodies, or they develop under the influence of external conditions generally.

A further example in which the question 'for the sake of what' might be asked concerns the lower levels of being, those of vegetative and inorganic nature; the question applies particularly strongly in the case of the latter. It is hard to believe that the variety to be observed in plants and inanimate things, with their apparently determinate nature, has no explanation, especially if this is not in like manner assumed for the more complex entities higher up in the hierarchy of being.

It has some plausibility, then, that differences between plants & inanimate things arise spontaneously and as a consequence of the meteorological conditions connected with the rotation of the cosmos.

10 a 22-8 ὑπὲρ δὲ ... πλείοσιν.

ἄλλως JL; αλλως P; ἀλλ' ὡς CA; ἄλλως ⟨θ'⟩ USENER (1890).
πόθεν [δ'] van Raalte; πόθεν δ' PJCL; πόθεν δὲ A; πόθεν τ' ZELLER II.2.825 n. 3.

Th. now proceeds to the question announced in 7 b 5-8: καὶ ταῦτα μὲν ἐνταῦθά που ζητεῖ τὴν σκέψιν, ἀφορισμὸν ἀπαιτοῦντα μέχρι πόσου τὸ τεταγμένον. Obviously the term **ὁ ἀφορισμός** ("delimitation"; so L-M) is used similarly in both passages (cp. also ληπτέον τινὰς ὅρους 11 a 2).[1] Just like the question about the limits of knowledge and being the present one concerns a delimitation as well, but now with regard to function or, as Th. in 7 b 7 has it, 'the ordered' (τὸ τεταγμένον; cp. ἡ τάξις 11 b 18)—that is, with regard to the idea that an entity is such and such for some reason. The reason why such a delimitation is necessary was given in the earlier passage: if the order were to extend further, the change would be for the worse (διὰ τί τὸ πλέον ἀδύνατον ἢ εἰς τὸ χεῖρον ἡ μετάβασις, 7 b 7-8).[2]

The transition to a different subject-matter is stressed by the location of the theme at the beginning of the sentence.[3]

For **ὑπέρ** see *ad* 4 a 2. The issue brought forward here is inconceivable without the Aristotelian concept of a final cause; in the biological writings of Th. statements to the effect that ἡ φύσις οὐδὲν ποιεῖ ματὴν are not lacking either.[4] See e.g.

> *CP* I.1.1 ἡ μὲν οὖν ἀπὸ τοῦ σπέρματος γένεσις κοινὴ πάντων ἐστὶν τῶν ἐχόντων σπέρμα, πάντα γὰρ δύναται γεννᾶν. τοῦτο δὲ καὶ τῇ αἰσθήσει φανερὸν ὅτι συμβαίνει, κατὰ δὲ τὸν λόγον ἴσως ἀναγκαῖον· ἡ γὰρ φύσις οὐδὲν μὲν ποιεῖ μάτην, ἥκιστα δ' ἐν τοῖς πρώτοις καὶ κυριωτάτοις, πρῶτον δὲ καὶ κυριώτατον τὸ σπέρμα· ὥστε τὸ σπέρμα μάτην ἂν εἴη μὴ δυνάμενον γεννᾶν, εἴπερ τούτου χάριν αἰεὶ τὸ σπέρμα καὶ πρὸς τοῦτο[5] πέφυκεν. (see also *ad* 4 b 5).
>
> II.1.1 δύο γὰρ δὴ μέρη ταῦτ' ἐστίν (sc. τὰ κατὰ τὰς ἐνιαυσίους ὥρας γινόμενα καὶ ὅσα κατὰ τὰς γεωργικὰς θεραπείας), τὸ μὲν ὥσπερ φυσικὸν καὶ αὐτόματον, τὸ δὲ τέχνης καὶ παρασκευῆς βουλομένης τὸ εἶναι εὖ. λόγος

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[1] As is recognized by REPICI (1990) 194, who nevertheless translates "definition". The translations by both R-F ("the assignation of ends") and LSJ ("the attainment of definiteness") disregard this similarity, in addition to disregarding the quantitative aspect involved in πάντα (as well as in μηδέν).
See also on R-F's interpretation of 24-5 πόθεν ... τελευτᾶν, p. 488 n. 5 below.

[2] The idea is apparently that contraries like order and disorder, good and bad are necessary for the being of cosmos as it is: see Ch. VII, 8 a 21 ff.

[3] Cp. the beginning of Ch. V, 7 b 9-11: ἐν δὲ ταῖς ἀρχαῖς, ὅθεν δὴ καὶ ὁ πρῶτος λόγος, εἰκότως ἄν τις καὶ τὸ περὶ τῆς ἠρεμίας ἀπορήσειεν, where after a dicussion of the elementary principles the argument returns to the question of the first principles.

[4] See the passages listed by EINARSON/LINK *ad CP* II.1.1; also REPICI (1990) 213.
It seems that these passages still wait for an unbiased discussion; see e.g. REPICI (1990) 212: "Before *blaming [Th.] for* assuming any so-called 'mechanistic' standpoint against Aristotle, we should be ready to test the real nature of certain schemes of interpretation that turn out to be as strict as they are inadequate." (italics added). REPICI (1985) is not available to me.

[5] τοῦτο u; τούτον U.

δ' ἀμφοῖν ἐστιν οὐχ ὁ αὐτός, ἀλλ' ὁ μὲν οἷον φυσικός, ὁ δὲ ἐπινοητικός, οὔτε γὰρ ἡ φύσις οὐθὲν μάτην, ἥ τε διάνοια βοηθεῖν θέλει τῇ φύσει.[1]

But also

CP IV.4.2 καὶ πάλιν ἐπὶ τῶν σπερμάτων αὖ, τὸ πηρωθὲν ἄγονον, ἀλλ' ἴσως τοῦτό γε καὶ ἀναγκαῖον· τὸ δὲ μηδὲν ὅλως γόνιμον ὥσπερ ἐλέγχει τὴν φύσιν ὅτι καὶ μάτην, ὃ καὶ ἡμῖν ὑπεναντίον πρὸς τὰ πρότερον.

All the same, **τοῦ πάνθ' ἕνεκά του**[2] **καὶ μηδὲν μάτην** is an unorthodox way of phrasing,[3] which testifies to a preoccupation with the boundaries that apply to explanation in terms of purpose. Contrast the restrictions involved in e.g.

Arist. *GA* 788 b 20-8 ἐπεὶ δὲ τὴν φύσιν ὑποτιθέμεθα, ἐξ ὧν ὁρῶμεν ὑποτιθέμενοι, οὔτ' ἐλλείπουσαν οὔτε μάταιον οὐθὲν ποιοῦσαν *τῶν ἐνδεχομένων περὶ ἕκαστον*, ἀνάγκη δὲ τοῖς μέλλουσι λαμβάνειν τροφὴν μετὰ τὴν [τοῦ γάλακτος] ἀπογαλάκτισιν ἔχειν ὄργανα πρὸς τὴν ἐργασίαν τῆς τροφῆς—εἰ οὖν συνέβαινεν, ὡς ἐκεῖνος (i.e. Δημόκριτος) λέγει, πρὸς ἥβην, ἐνέλειπεν ἂν ἡ φύσις *τῶν ἐνδεχομένων αὐτῇ τι ποιεῖν*, καὶ τὸ τῆς φύσεως ἔργον ἐγίγνετ' ἂν παρὰ φύσιν. τὸ γὰρ βίᾳ παρὰ φύσιν, βίᾳ δέ φησι συμβαίνειν τὴν γένεσιν τῶν ὀδόντων.

It seems, then, that in the present context Th. is referring neither to a "view" (R-F) nor to a "maxim",[4] but to the question or issue of the qualifications with which τὸ *πάνθ'* ἕνεκά του applies; cp. χαλεπὸν δὲ πάλιν αὐτὸ ⟨τὸ⟩ τοὺς λόγους ἑκάστοις περιθεῖναι πρὸς τὸ ἕνεκά του συνάγοντας *ἐν ἅπασιν*, 7 a 19-21.

This difficulty is analyzed into two different problems, viz. (1) the question of the boundaries, the beginning and end of the chain of teleological causation (see *ad* πόθεν ... τελευτᾶν 24-5, below), and (2) the circumstance that some entities apparently resist teleological explanation (καὶ δὴ ἔνια κ.τ.λ., 25-8) altogether. For this analysis cp. μέχρι πόσου καὶ τίνων ζητητέον αἰτίας, 9 b 2-3; also καὶ ἄλλως μέγα καὶ πρὸς τὰς καθ' ἕκαστα πραγματείας ἀναγκαῖον, 9 b 17-8.

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[1] In *CP* I.16.10-3 Th. will argue that cultivation is 'natural' as well: see *ad* τῷ αὐτομάτῳ 10 b 27, pp. 534 f. below, and Introduction p. 32 n. 5.

[2] For του = τινός, see Hicks *ad* Arist. *DA* 434 b 29.

[3] "It is worth noting that Aristotle never speaks this loosely; it is always ***hê physis*** that does nothing in vain and acts for the good." Lennox (1985) 160 n. 15. See also Ps.-Arist. *Spir.* 476 a 12 ff. ὥστ' ἐπεὶ μάτην οὐδὲν ὁρῶμεν ποιοῦσαν τὴν φύσιν, δυοῖν δ' ὄντοιν θάτερον ἂν ἦν μάτην, διὰ τοῦτο τὰ μὲν ἔχει βράγχια τὰ δὲ πνεύμονα, ἄμφω δ' οὐδέν.
L-M *ad loc.*: "la formule ... apparaît comme le nom d'un programme "panglossien" qui n'est naturellement pas plus celui d'Aristote (...) que de Théophraste, mais qui sera celui des Stoïciens."

[4] Lennox (1985) 146; cp. also Reale: "dottrina", Tricot "théorie".

The question about the limits of the chain of teleological causation (i.e., how long one should go on to look for answers in terms of one state of affairs being better than another) is presented as a general one by **ἄλλως ... καὶ δὴ ...**[1]

USENER's addition of ἄλλως ⟨θ'⟩[2] makes for a more idiomatic way of phrasing,[3] which is followed by καὶ δὴ καί[4] more frequently than by καὶ δή. On the other hand, since the structure of the argument is clear anyway, in a text as unpolished as ours there is no need to assume an error in the transmission such as the loss of τε.

For this need for a delimitation of the series cp. also

Arist. *Met.* α 994 b 9-16 ἐπεὶ δὲ τὸ οὗ ἕνεκα τέλος, τοιοῦτον δὲ ὃ μὴ ἄλλου ἕνεκα ἀλλὰ τἆλλα ἐκείνου, ὥστ' εἰ μὲν ἔσται τοιοῦτόν τι ἔσχατον, οὐκ ἔσται ἄπειρον, εἰ δὲ μηθὲν τοιοῦτον, οὐκ ἔσται τὸ οὗ ἕνεκα, ἀλλ' οἱ τὸ ἄπειρον ποιοῦντες λανθάνουσιν ἐξαιροῦντες τὴν τοῦ ἀγαθοῦ φύσιν (καίτοι οὐθεὶς ἂν ἐγχειρήσειεν οὐδὲν πράττειν μὴ μέλλων ἐπὶ πέρας ἥξειν)· οὐδ' ἂν εἴη νοῦς ἐν τοῖς οὖσιν· ἕνεκα γάρ τινος ἀεὶ πράττει ὅ γε νοῦν ἔχων, τοῦτο δέ ἐστι πέρας· τὸ γὰρ τέλος πέρας ἐστίν.

Although commonly interpreted as referring to a more or less current opinion to the effect that such an ἀφορισμός *would* be easy,[5] **καθάπερ πλεονάκις λέγεται** is apparently not just equivalent to ὥς τινές φασιν. Presumably πλεονάκις here[6] introduces a common saying or proverb,[7] just as πολλάκις

[1] That is, unless ἄλλως is connected with what precedes rather than what the follows, as was proposed by ZELLER (II.2.825 n. 3, in which case μάτην would be expunged as an explanatory gloss on ἄλλως—sc. in the sense of "at random" (see LSJ 3 s.v.; "*aliter* (int. atque putaveras vel optaveras), h.e. *frustra*" AST s.v.). ZELLER additionally suggests reading πόθεν τ' instead of πόθεν δ' in 24—apparently to match καὶ δὴ ἔνια in 25 (*l.c.*).

[2] Adopted by both R-F and L-M.

[3] E.g. *CP* I.16.10 τὸ ⟨μὲν⟩ κατὰ φύσιν ..., τὸ δ' ἔξωθεν, ἄλλως τε καὶ κατὰ τέχνην, II.19.4 ἡ δὲ αἴσθησις οὕτως ὀξεῖα γινομένη τοῖς καθ' ὕδατος οὐκ ἄλογος, ἄλλως τε καὶ ἐν τόποις θερμοῖς καὶ ἐμπύροις. Cp. ἄλλως ⟨τε⟩ *CP* I.21.4, quoted p. 282 above.

[4] E.g. Plato *Soph.* 259 D 9 – E 2 καὶ γάρ, ὠγαθέ, τό γε πᾶν ἀπὸ παντὸς ἐπιχειρεῖν ἀποχωρίζειν ἄλλως τε οὐκ ἐμμελὲς καὶ δὴ καὶ παντάπασιν ἀμούσου τινὸς καὶ ἀφιλοσόφου.

[5] "the assignation of ends is in general not easy, as it is usually stated to be" (tr. R-F; "Mais quel penseur a jamais affiché un tel optimisme?", L-M *ad loc.*).
Apart from the fact that this interpretation of ἀφορισμός is quite unlikely in this context (see above), it seems to break down on ἄλλως, which is firmly embedded in the present argument.

[6] πλεονάκις expresses that something is done repeatedly: *CP* I.13.11 ὃ πλεονάκις εἴρηται, i.e. in *CP* I.11.6, I.12.7, I.13.2; with the present tense e.g. Arist. *Top.* 141 a 21-2 ὥστε πλεονάκις τὸ αὐτὸ λέγει.
See also *CP* III.6.6 ὥσπερ γὰρ λέγεται πολλάκις, ἡ οἰκεία μεγίστην ἔχει ῥοπὴν καὶ πρὸς ἀντίληψιν καὶ πρὸς εὐκαρπίαν, which is apparently not "For (as we repeat) ..." EINARSON/LINK (referring to other passages from *CP* and *HP*), but rather refers to a saying like "what is appropriate carries most weight" (τὸ οἰκεῖον μεγίστην ἔχει ῥοπήν, or simply μέγιστον τὸ οἰκεῖον); cp. III.1.6.

[7] Cp. L-M *ad loc.*: "le présent λέγεται se réfère à un propos, presqu'un adage, que l'on peut supposer fréquent dans la discussion interne à l'Académie."

in 465.20-1 FHS&G: ἀλλ' ὅπερ πολλάκις λέγεται, τοῦτο ἀληθὲς ἔοικεν εἶναι, διότι πάντες ἥκιστα περὶ ἑαυτῶν βουλεύονται.

It seems unlikely that this saying is the complaint "ὁ ἀφορισμὸς οὐ ῥᾴδιος", since this, as we have seen, derives from the present argument; more likely it refers to the following **πόθεν ... τελευτᾶν**;. On this view the particle **δ(έ)** transmitted by the manuscripts, which is not easily explained on any interpretation,[1] is out of place.[2] On the supposition that καθάπερ πλεονάκις λέγεται was at some time taken to refer backwards it seems just possible that in the absence of puncutation δ' was added at an early stage of the transmission. I therefore propose to bracket δέ.

However this may be, the question πόθεν ... τελευτᾶν apparently expresses a feeling of desperation with regard to some activity which must be entered upon, either (1) with ὁ ἀφορισμός, or more precisely the series implied by it, as the grammatical subject: "where should it begin and with what kind of things should it end?"[3] or (2) with the investigator as the subject implied: "where should we begin and what sort of things are we expected to end up with?". For this use of τελευτᾶν **εἰς** τι compare e.g.

> Arist. *Sens.* 436 a 19 – b 1 διὸ σχεδὸν τῶν τε περὶ φύσεως οἱ πλεῖστοι καὶ τῶν ἰατρῶν οἱ φιλοσοφωτέρως τὴν τέχνην μετιόντες, οἱ μὲν τελευτῶσιν εἰς τὰ περὶ ἰατρικῆς, οἱ δ' ἐκ τῶν περὶ φύσεως ἄρχονται περὶ τῆς ἰατρικῆς.

For the latter cp. Soph. *OC* 476 τὸ δ' ἔνθεν ποῖ τελευτῆσαί με χρή;.[4]

The difference is one of translation rather than of interpretation. The use of **χρή** does not imply a personal subject: see *CP* I.1.1 εὐθὺ γὰρ χρὴ συμφωνεῖσθαι τοὺς λόγους τοῖς εἰρημένοις, or 584A.106 FHS&G οὐθὲν γὰρ ὡς τὸ θῦμα ἀβλαβὲς εἶναι χρὴ πᾶσιν. The aorist infinitive ἄρξασθαι as opposed to the present tense stem τελευτᾶν seems to be explained by the fact that in the first case the infinitive itself expresses the object sought, whereas in the second case this is expressed by **ποῖα**.[5] ποῖα refers to the kind of object that constitutes the end of the series of final causation (the verb τελευτᾶν being particularly expressive in this context), but which are not easy to identify.[6]

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1 With καθάπερ πλεονάκις λέγεται referring to ὁ ἀφορισμὸς οὐ ῥᾴδιος one might have expected γάρ rather.

2 Cp. Zeller's conjecture of τ'.

3 E.g. Xenoph. Fr. 27 ἐκ γαίης γὰρ πάντα καὶ εἰς γῆν πάντα τελευτᾶν. This use of τελευτᾶν **εἰς** τι with reference to a terminus reached by the grammatical subject, or its ending up in some situation, is apparently the more frequent use of the verb. With ποῖ also Aesch. *Pers.* 735 πῶς τε δὴ καὶ ποῖ τελευτᾶν; ἔστι τις σωτηρία; (ποῖ τελευτᾶν = εἰς τίνα τελευτὴν ἥκειν Broadhead *ad loc.*); Plato *Leg.* 630 B 8 ποῖ δὴ τελευτᾷ νῦν ἡμῖν οὗτος ὁ λόγος;

4 "and then, to what last rite shall I proceed?" Jebb; "to what end must I bring it?" LSJ.

5 Cp. Sicking (1991) 166 ff.

6 In ποῖα, then, we have (as it were) the teleological counterpart (or, aspect) of τὰ πρῶτα

καὶ δή adds to the general difficulty expressed by ἄλλως particular instances which involve a problem; **ἔνια** represents the apparent exceptions to πάντα (10 a 22), which frustrate the expectation that all things are for the sake of something (**οὕτως**: sc. ἕνεκά του). ἔνια is either an accusative, very loosely used: in the case of some things (sc. ὁ ἀφορισμὸς οὐ ῥᾴδιος), or a nominative, used somewhat *ad sensum*:[1] sc. χαλεπά, or δόξειεν ἂν ἔχειν ἀπορίαν (or the like). In view of τὰ μὲν ... τὰ δ(έ) the latter interpretation seems more likely. The change of grammatical subject after the parenthesis καθάπερ ... τελευτᾶν proceeds quite naturally due to the fact that in the first part of the sentence the focus was on πάντα as the province asking for an ἀφορισμός.[2]

Phenomena which do not appear to be for the sake of something in some cases seem to be **συμπτωματικῶς** (i.e. presumably 'by coincidence'), in others, **ἀνάγκῃ τινί** (by some necessity): see *ad* συμπτώματα καὶ δι' ἑτέρας ἀνάγκας 10 b 18-9. Examples of the apparent absence of teleological causation may be found in the case both of the heavenly bodies (**τοῖς οὐρανίοις**) and of the things on earth (for the use of **περί** compare 7 b 1-2 τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν). In the latter case, the idea seems to be, this happens more frequently than not: for **πλείοσιν** cp. *HP* I.14.4 ἀλλὰ τῶν μὲν ἀγρίων ἀνώνυμα τὰ πλεῖστα καὶ ἔμπειροι ὀλίγοι· τῶν δὲ ἡμέρων καὶ ὠνομασμένα τὰ πλείω καὶ ἡ αἴσθησις κοινότερα.
See also μάλιστα δ' ἂν δόξειεν ἔχειν τήν γε τάξιν τῶν μὲν αἰσθητῶν τὰ οὐράνια 11 b 17-9, and note *ad loc.* Compare

> Arist. *PA* 641 b 18-20 τὸ γοῦν τεταγμένον καὶ τὸ ὡρισμένον πολὺ μᾶλλον φαίνεται ἐν τοῖς οὐρανίοις ἢ περὶ ἡμᾶς, τὸ δ' ἄλλοτ' ἄλλως καὶ ὡς ἔτυχε περὶ τὰ θνητὰ μᾶλλον.

Unless one assumes that τὰ οὐράνια here includes the climatological conditions connected with the motions of the heavenly bodies,[3] the examples advanced in the passage that follows all relate to the second example, viz. the sphere of the earthly phenomena.

τῆς φύσεως (10 a 6; i.e., τὰ κυριώτατα, which are different from, and prior to, the objects of astronomy, 10 a 7) we were searching for from a more epistemological point of view in the preceding chapter.

[1] Cp. R-F *ad loc.*

[2] With the interpretation of ἀφορισμός as "the assignation of ends" one is forced to supply οὐ ῥᾴδιά (ἐστιν ἀφορίζεσθαι: so R-F; see also USENER (1890) *ad loc.*). Cp. USENER's previous conjecture of τῷ ἔνια (1858) 48; "fortasse recte" R-F) and his second one of ἐνίων τῷ (1890), which both preserve ὁ ἀφορισμός as the grammatical subject.

[3] See e.g. *HP* II.4.4 ἀλλ' ἐκεῖνο συμβαίνει περὶ τὰ δένδρα καὶ ὅλως πᾶσαν τὴν ὕλην, ..., ὥστε αὐτομάτην μεταβλαστάνειν μεταβολῆς τινος γινομένης ἐκ τῶν οὐρανίων τοιαύτης.

Th. may be thinking, however, of the diversity of movements of the heavenly bodies themselves, which does not make the explanation that they are heading for one and the same goal plausible.[1] In fact, the inclusion of the heavenly bodies might account for the difference between our passage and that at 10 b 18-9 below—here, where the heavenly bodies are included, the supposed necessity being left unspecified, explanation in terms of *external* necessities (as in the case of animals an plants) being less likely.

In our interpretation,[2] the examples offered by Th. in the present passage are not directed against Aristotle, who not only recognized that some phenomena resist teleological explanation, but explicitly asserted as much for some of the phenomena referred to. Th. is rather exploring the limits of teleological causation itself, as he did with regard to the limits of knowledge and being in the preceding chapter; and this general point of view explains our finding that the present argument assesses an "over-all teleology"[3] which is more strict than the final principle as applied by Aristotle himself.

It is not surprising, then, that some of the examples discussed by Th. are the same as those acknowledged by Aristotle to resist explanation in terms of final causation,[4] while on the other hand Th. calls in question the possibility of explaining teleologically phenomena to which Aristotle did indeed ascribe a function or purpose.[5] Apart from the fact that there is a limit to teleological explanation insofar as one should not go on to ask for a purpose of being as such, Th. wants to show that there is an end to teleological explanation at all levels of being, and for this reason he offers various examples showing that explanation in terms of purpose is not plausible, or does not work.[6]

If the present passage invites comparison between Th.' and his predecessor, it seems to testify to an attitude which is different from anything to be found in Aristotle's works, by showing an awareness that in some cases the

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[1] Cp. 11 b 17-9.

[2] For recent discussions of the subject see Lennox (1985), Most (1988) 224 ff., Vallance (1988), Repici (1990).

[3] Balme (1972) 96; see Repici (1990) 191.

[4] Taking into account that within the Peripatos there must have been debate on the subject, this might be maintained without supposing that Th. "has deftly picked out passages in Aristotle that reveal him struggling to explain a structure teleologically, when he might have been better off admitting that such explanations are inappropriate." Lennox (1985) 158.

[5] For the idea that our treatise is actually older than the treatises in which Aristotle treated these phenomena, see Most (1988) 232-3; cp. L-M *ad* 11 a 12.

[6] The fact that Th. advances phenomena to which Aristotle did ascribe a purpose would be curious only if Aristotle's explanations were so convincing that the purpose of the phenomenon in question would be obvious henceforth.

question of a purpose no longer makes sense, instead of a willingness to go to great lengths to show that after all there *is* some purpose.

For the different situation in IX.2, 11 a 1 ff., where Th. *is* advancing a type of arguments which prevailed in an Academic-Peripatetic context see commentary *ad loc.* (esp. pp. 542, 543; 545-9).

10 a 28 – b 7 τίνος γὰρ ἕνεκα ... παρόμοια τούτοις;

This first group of phenomena exemplifying the apparent absence of teleological causation comprises all sorts of processes on earth and in the earth, some of them explicitly characterized by the absence of an obvious direction.

αἱ ἔφοδοι καὶ ἀνάρροιαι θαλάττης presumably refers to some more or less regular tidal movement.[1] Cp. the phenomena referred to in

> *HP* IV.7.4 ἐν δὲ ταῖς νήσοις ταῖς ὑπὸ τῆς πλημμυρίδος καταλαμβανομέναις δένδρα μεγάλα πεφυκέναι ἡλίκαι πλάτανοι καὶ αἴγειροι αἱ μέγισται· συμβαίνειν δέ, ὅθ' ἡ πλημμυρὶς ἐπέλθοι, τὰ μὲν ἄλλα κατακρύπτεσθαι ὅλα, τῶν δὲ μεγίστων ὑπερέχειν τοὺς κλάδους, ἐξ ὧν τὰ πρυμνησία ἀνάπτειν, εἶθ' ὅτε πάλιν ἄμπωτις γίνοιτο ἐκ τῶν ῥιζῶν.
>
> IV.7.5 περὶ δὲ τὴν Περσίδα τὴν κατὰ τὴν Καρμανίαν, καθ' ὃ ἡ πλημμυρὶς γίνεται, ...
>
> [Th.] *Sign.* 29 ἡ ἄμπωτις βόρειον πνεῦμα σημαίνει, πλημμύρα δὲ νότιον. ἐὰν μὲν γὰρ ἐκ βορείων πλημμύρα ἥκῃ, εἰς νότιον μεταβάλλει, ἐὰν δ' ἐκ νοτίων ἄμπωτις γίνηται, εἰς βόρειον μεταβάλλει.

A daily tidal movement is mentioned by Hdt. II.11, VII.198 τὴν Μηλίδα παρὰ κόλπον θαλάσσης, ἐν τῷ ἄμπωτίς τε καὶ ῥηχίη ἀνὰ πᾶσαν ἡμέρην γίνεται; in VIII.129 Hdt. is speaking of a phenomenon occurring frequently but presumably not daily: ... γίνεται ἄμπωτις τῆς θαλάσσης μεγάλη καὶ χρόνον ἐπὶ πολλόν. ... ἐπῆλθε πλημυρὶς τῆς θαλάσσης μεγάλη, ὅση οὐδαμά κω, ὡς οἱ ἐπιχώριοι λέγουσι, πολλάκις γινομένης.[2]

The plural ἔφοδοι is used as an equivalent of πλημμυρίς in *Doxogr. Gr.* 383.20, *Placit.* 17.16; but Arist. *Meteor.* 343 b 3 ἡ τοῦ κύματος ἔφοδος refers to a tidal wave accompanying an earthquake. For ἀνάρροιαι one might compare Nicoch. Fr. 16 A Edm. ῥηγνὺς δὲ πολλὰς κυμάτων ἀναρροάς: "breaking many a backwash of the waves", although in default of any context the reference is uncertain; in Ps.-Arist. *Mir.* 843 a 27 the singular is used apparently with reference to a more occasional phenomenon.

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[1] *Pace* VALLANCE (1988) 28 ff.; see below.

[2] Cp. also *SVF* II.1013 p. 302, quoted *ad* 7 b 2-5, p. 322 n.

All things considered, it seems quite possible that some more or less regular movement of the sea is referred to—whether or not this coincides with what we understand by 'ebb and flow'.[1]

However this may be, the point Th. wants to make is obviously that these fluctuations do not seem to serve any purpose: actually these incursions and refluxes fit in badly with a narrow concept of teleological causation according to which one might expect things to show a tendency towards one state rather than another. This of course does not preclude their being accounted for by another sort of cause; the point is that it is difficult to say why this would be 'better'.[2]

On the supposition that ἔφοδοι καὶ ἀνάρροιαι refers to regular movements of the type observed in *HP* IV.7.4 quoted above, I take it that with **ἢ τίνος** (sc. ἕνεκα) **αἱ προχωρήσεις** Th. adds the question about the purpose of more radical changes in the relative proportion of sea and land like those discussed by Aristotle in *Meteor.* I.14:[3]

Meteor. 352 b 16-9 ἐπεὶ δ' ἀνάγκη τοῦ ὅλου γίγνεσθαι μέν τινα μεταβολήν, μὴ μέντοι γένεσιν καὶ φθοράν, εἴπερ μένει τὸ πᾶν, ἀνάγκη, καθάπερ ἡμεῖς λέγομεν, μὴ τοὺς αὐτοὺς ἀεὶ τόπους ὑγρούς τ' εἶναι θαλάττῃ καὶ ποταμοῖς καὶ ξηρούς.

353 a 22-4 ...· τῆς δὲ θαλάττης τὰ μὲν ἀπολειπούσης τὰ δ' ἐπιούσης ἀεὶ φανερὸν ὅτι τῆς πάσης γῆς οὐκ ἀεὶ τὰ αὐτὰ τὰ μέν ἐστι θάλαττα τὰ δ' ἤπειρος, ἀλλὰ μεταβάλλει τῷ χρόνῳ πάντα.

Cp. also

Ps.-Arist. *De Mundo* 400 a 25-9 σεισμοί τε γὰρ ἤδη βίαιοι πολλὰ μέρη τῆς γῆς ἀνέρρηξαν, ὄμβροι τε κατέκλυσαν ἐξαίσιοι καταρραγέντες, ἐπιδρομαί τε κυμάτων καὶ ἀναχωρήσεις πολλάκις καὶ ἠπείρους ἐθαλάττωσαν καὶ θα-

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[1] Contrast Lee (*ad* Arist. *Meteor.* 354 a 7 ff. διὰ τὸ ταλαντεύεσθαι (τὴν θάλατταν) δεῦρο κἀκεῖσε πολλάκις, 7-8): "It is not clear exactly what Aristotle means by this ebb and flow (lit. swinging to and fro) of the sea, for he had no real knowledge of the tides.", and Vallance (1988) 29: "The standard ancient view was that Posidonius was the first to provide a detailed account of the tides, and there is no real evidence to suggest that this is not correct."

[2] *Contra* Vallance (*l.c.*), who suggests that if tidal movements were at stake here, Th. would be "ignoring Aristotle's own explanation altogether (at *Meteorology* II.1, 354a12ff.—that movements are caused by rivers flowing into the sea)." Even apart from the fact that it is uncertain what kind of movements Aristotle is explaining here, it may be noted that in the survey of theories with regard to the question πῶς ἄμπωτις καὶ πλήμμυραι γίγνονται in *Placita* 5.17 (*Doxogr. Gr.* 382.14 ff.), the theory that the tides are effected by the winds, which themselves depend on the movements of the sun is attributed to Aristotle. Cp. Ps.-Arist. *De Mundo* 396 a 25-7: πολλαί τε ἀμπώτεις λέγονται καὶ κυμάτων ἄρσεις συμπεριοδεύειν ἀεὶ τῇ σελήνῃ κατά τινας ὡρισμένους καιρούς.

[3] I.e., those regarded as the referent of αἱ ἔφοδοι καὶ ἀνάρροιαι by Vallance, *l.c.*

λάττας ἠπείρωσαν, βιαί τε πνευμάτων καὶ τυφώνων ἔστιν ὅτε πόλεις ὅλας ἀνέτρεψαν, ...

There seems to be no reason, then, to conceive of προχωρήσεις as "extensions of the land", such as those caused by sedimentation:[1] not only may ἔφοδοι καὶ ἀνάρροιαι very well refer to some sort of tidal movements, as I argued above, but furthermore this interpretation of προχωρήσεις seems to be quite unlikely in view of ἤ τίνος, which strongly suggests that a *different* phenomenon rather than the reverse side of the same phenomenon is concerned.

Here again, then, the question seems to be: if nature does not tend towards one state rather than the other, what indeed is the purpose of these changes? Aristotle in *Meteor.* 352 a 29 ff. suggests that at least some of these phenomena occur at fixed intervals owing to the cyclical recurrence of a 'great winter' (μέγας χειμών) accompanied by an excess of rains at varying places—an explanation in the sphere of side-effects which harmonizes with the purport of the present passage.[2]

USENER (1890) proposes to add as a complement ⟨καὶ ἀναχωρήσεις⟩, referring to *Doxogr. Gr.* 486.4.17 ff. (184.3 FHS&G), where θαλάττης ἀναχωρησέως appears as the second issue on which Th. is supposed to have disagreed with his (allegedly Stoic) opponents; and indeed the phenomena allegedly adduced by these people as indices pleading against the eternity of the world may serve to exemplify the type of phenomena at stake in the present passage:

184.18 ff. FHS&G (= Philo *De aet. mund.* 23.120 ff.) καὶ μὴν ἥ γε θάλασσα, φασίν, ἤδη μεμείωται. μάρτυρες δ' αἱ νήσων εὐδοκιμώταται Ῥόδος τε καὶ Δῆλος· αὗται γὰρ τὸ μὲν παλαιὸν ἠφανισμέναι κατὰ τῆς θαλάττης ἐδεδύκεσαν ἐπικλυζόμεναι, χρόνῳ δ' ὕστερον ἐλαττουμένης ἠρέμα, κατ' ὀλίγον ἀνίσχουσαι διεφάνησαν, ὡς αἱ περὶ αὐτῶν ἀναγραφεῖσαι μηνύουσιν ἱστορίαι. τὴν δὲ Δῆλον καὶ Ἀνάφην ὠνόμασαν δι' ἀμφοτέρων ὀνομάτων πιστούμενοι τὸ λεγόμενον, ἐπειδὴ γὰρ ἀναφανεῖσα δήλη ἐγένετο, ἀδηλουμένη καὶ ἀφανὴς οὖσα τὸ πάλαι. (...)

(31 f.) πρὸς δὲ τούτοις μεγάλων πελαγῶν μεγάλους κόλπους καὶ βαθεῖς ἀναξηρανθέντας ἠπειρῶσθαι καὶ γεγενῆσθαι τῆς παρακειμένης χώρας

[1] As VALLANCE (1988) 30 has it, who refers to Arist. *Meteor.* 351 b 30 ἡ χώρα τοῦ ποταμοῦ πρόσχωσις οὖσα τοῦ Νείλου. It may be noted that *HP* IX.7.4 (αὕτη δ' ἀρίστη ἐν Ἰλλυριοῖς, οὐκ ἐν τῇ πρὸς θάλατταν χώρᾳ, ἀλλ' ἐν τῇ ἀνακεχωρηκυίᾳ, κειμένη δὲ μᾶλλον πρὸς ἄρκτον) suggests that, in principle, there could be talk of a προχώρησις of land, too.

[2] Cp. VALLANCE (1988) 29: "The changes on the earth's surface are indirectly referred to [sc. by Aristotle] as *pathèmata* (352a18), and these are necessitated by larger cyclical changes. That is to say, they are side effects and as such do not submit to explanation in terms of purpose. We might suppose that Theophrastus would account for such things similarly in terms of the species of necessity, which he mentions at *Metaphysics* 10 a 21[26?]-7."

μοῖραν οὐ λυπρὰν σπειρομένους καὶ φυτευομένους, οἷς σημεῖ' ἄττα τῆς παλαιᾶς ἐναπολελεῖφθαι θαλαττώσεως ψηφῖδάς τε καὶ κόγχας κ.τ.λ.
See also Ps.-Arist. *De Mundo* 400 a 27, above.

Given that the emphasis in our passage is on the unaccountability, in terms of teleological causation, of the occurrence of *both* processes instead of a development proceeding in one direction rather than the other, an explicit reference to the opposite process, too, would have been very much to the purpose. On the other hand, since in the present context there is no risk of misinterpretation, the absence of an expected complement may count as one irregularity among others,[1] so that the addition of ⟨καὶ ἀναχωρήσεις⟩ is unnecessary. (So L-M *ad loc.*)

—There is even less reason to delete the clause τίνος αἱ προχωρήσεις[2] altogether, as R-F do, on the supposition that it constitutes an alternative version of the words immediately preceding. As was argued above, two different types of phenomena are likely to be concerned, the one occurring regularly, the other only occasionally.

ἢ ἀναξηράνσεις καὶ ὑγρότητες: changes in meteorological conditions: "droughts setting in and humidities"—presumably referring not only to rain but to moisture (drying up) in general. See e.g.

Vent. 49 ἀλλ' ὅσῳ θερμότεραι αἱ ἡμέραι, κωλύουσι ⟨μᾶλλον⟩ πνεῖν ξηραίνουσαι τὰς ὑγρότητας. (also Ps.-Arist. *Probl.* 941 a 36).
CP I.13.6 δοκεῖ δὲ καὶ ἡ γῆ τότε (sc. in the Dog-days) καθυγράνθαι μᾶλλον· ὅθεν καὶ ὑδάτων ἀναδόσεις καὶ ἕτεραι μεταβολαὶ γίνονται πλείους.

As appears from **καὶ ὅλως**, which is used when one is passing from a more specific to a more general case,[3] these droughts and humidities, too, involve changes (**μεταβολαί**) which do not seem to follow any rational principle and are, as it were, unpredictable; for this connotation[4] of (πρὸς) **ἄλλοτ' ἄλλο** see Arist. *PA* 641 b 20 where ἄλλοτ' ἄλλως καὶ ὡς ἔτυχε is opposed to τεταγμένον. These more general changes as well as **φθοραί καὶ γενέσεις** (the order suggesting cyclical processes) may still refer to changes in meteorological

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[1] Somewhat differently Regenbogen 1390 "In der so locker komponierten kleinen Schrift ist mit Ausweichungen des Gedankenzusammenhangs zu rechnen, und mir scheint in 4-6 keine intolerable Repitition von 3 vorzuliegen."

[2] "the original form of which was no doubt τίνος αἱ προχωρήσεις καὶ ἀναχωρήσεις", R-F *ad loc.*

[3] See e.g. *HP* I.2.3 ἔχει δὲ ἴσως καὶ ἄλλας διαφορὰς καὶ ταῦτα καὶ ὅλως τὸ τῶν φυτῶν γένος· ... ; *CP* I.4.1 ἔνια γὰρ καὶ αὐτόματα βλαστάνει καὶ φυτεύουσιν ἀπὸ τῶν ῥιζῶν, ὥσπερ τὰ κεφαλόρριζα καὶ ὅλως ὧν παχεῖα καὶ σαρκώδης ἐστὶν ἡ ῥίζα.; [Th.] *Sign.* 43 Ἄθως καὶ Ὄλυμπος καὶ ὅλως ὀρέων κορυφαὶ κατεχόμεναι ὑπὸ νεφελῶν χειμέριον.

[4] Cp. also the use of ἄλλοτε ἄλλως in Plato *Phaedo* 78 D 3 (opp. ἀεὶ κατὰ ταὐτά; see *ad* 4 a 5-6). Cp. Theognis, 157-8 Ζεὺς γάρ τοι τάλαντον ἐπιρρέπει ἄλλοτε ἄλλως, / ἄλλοτε μὲν πλουτεῖν, ἄλλοτε μηδὲν ἔχειν.

and climatological conditions (for γένεσις and φθορά with reference to fire, see e.g. *Ign.* 10; for γένεσις of rain see *Vent.* 5). On the other hand, degrees of humidity are obviously supposed to influence changes in, and the generation of, organic nature as well. See e.g.

HP IV.14.8 γίνονται δὲ νόσοι καὶ τῶν καρπῶν αὐτῶν, ἐὰν μὴ κατὰ καιρὸν τὰ πνεύματα καὶ τὰ οὐράνια γένηται· συμβαίνει γὰρ ὁτὲ μὲν ἀποβάλλειν γενομένων ἢ μὴ γενομένων ὑδάτων, οἷον τὰς συκᾶς, ὁτὲ δὲ χείρους γίνεσθαι σηπομένους καὶ καταπνιγομένους ἢ πάλιν ἀναξηραινομένους[1] παρὰ τὸ δέον. χείριστον δὲ ἐὰν ἀπανθοῦσί τισιν ἐφύσῃ, καθάπερ ἐλάᾳ καὶ ἀμπέλῳ· συναπορρεῖ γὰρ ὁ καρπὸς δι' ἀσθένειαν.

II.4.4 καὶ κατὰ τὰς τῶν τόπων ἀλλοιώσεις, ὥσπερ ὁ ὕδρος εἰς ἔχιν ξηραινομένων τῶν λιβάδων.

CP I.5.2 αἱ δ' ἐπομβρίαι καὶ σήψεις τινὰς ποιοῦσιν καὶ ἀλλοιώσεις, ἐπὶ πολὺ διικνουμένου τοῦ ὑγροῦ, καὶ τρέφειν καὶ ἐπαύξειν δύνανται τὰ συνιστάμενα, θερμαίνοντος τοῦ ἡλίου καὶ καταξηραίνοντος, ὥσπερ καὶ τὴν τῶν ζῴων γένεσιν οἱ πολλοὶ ποιοῦσιν.

II.16.3 αὕτη μὲν οὖν, εἴπερ ἀληθής, ὥσπερ φθορά τις ἔοικεν εἶναι διὰ πλῆθος ὑγροῦ (γίνεται γὰρ δι' ἐπομβρίαν)· ...

359A.44-8 FHS&G (= Photius *Bibl.* 166) ὅτι καὶ οἱ μύες ἐν ταῖς ἀρούραις ἀθρόον γίνονται, καὶ ἐν τοῖς αὐχμοῖς μᾶλλον ἢ ἐν ταῖς ἐπομβρίαις· πολέμιον γὰρ αὐτοῖς τὰ ὕδατα. πολύγονον δὲ τὸ ζῷον. ἀπόλλυται δὲ τῇ μὲν ἐμφανεῖ καὶ ἔξωθεν φθορᾷ διὰ πλῆθος ὑδάτων· τοῦτο γὰρ ἔξω χειμάζει καὶ εἰς τὰς μυωπίας παρεισρεῖ.

Cp. commentary *ad* 7 b 2-5, pp. 318-24 above.

The position of the verb **γίνονται** makes it plausible that we should read **ᾗ**[2] instead of ἤ: changes in climatological and meteorological conditions are responsible for phenomena in the earth itself (**ἐν αὐτῇ τῇ**[3] **γῇ**),[4] cp. *Ign.* 3 ὁμοίως δὲ καὶ τὰ ἐν τοῖς μεταρσίοις ἐκπυρούμενα καὶ τὰ ἐν τῇ γῇ (also 18, quoted below); *Lap.* 1 τῶν ἐν τῇ γῇ συνισταμένων τὰ μέν ἐστιν ὕδατος, τὰ δὲ γῆς. See also τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολάς 11 b 14-5 .

The genitive **μεθισταμένων** probably depends on αἱ ... ἀλλοιώσεις (καὶ μεταβολαί); cp. Ps.-Arist. *Color.* 791 a 9-10 τὸ δὲ μέλαν χρῶμα συνακο-

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[1] ἀναξηραίνεσθαι also in *HP* V.5.6, of moisture due to the core of wood; *Lap.* 11, of stones exposed to the sun; but cp. also 184 FHS&G, above.

[2] Which was proposed by BIGNONE (1931), 113-4 and adopted by L-M: "à la manière dont à l'intérieur de la terre elle-même, les altérations et les transformations se produisent". Cp. *ad* 9 b 1.

[3] For the phrasing of ἐν *αὐτῇ τῇ* γῇ (also Arist. *Meteor.* 378 a 17, below) see *ad* 4 b 4.

[4] There is no reason, therefore, to seclude ᾗ αἱ μὲν ἐν αὐτῇ τῇ γῇ ... μεθισταμένων as USENER (1890) does, who conceives it as a more elaborate version of καὶ ὅλως πρὸς ἄλλοτ' ἄλλο μεταβολαί (κ.τ.λ.?).

λουθεῖ τοῖς στοιχείοις εἰς ἄλληλα μεταβαλλόντων.[1] In any case the idea seems to be that the changes in the earth are due to changes at the level of the elementary bodies; compare the modifications in smell and taste of inanimate objects described in

Od. 6 ἐν δὲ τοῖς ἀψύχοις ταῖς τῶν ἁπλῶν δυνάμεσι καὶ γίνονται καὶ μεθίστανται (sc. αἱ ὀσμαί) καθάπερ οἱ χυμοί.

or the change from darnel to wheat ascribed to a shift in the 'conditons' of air and food in

CP V.3.7 ἐπεὶ ἔν γε τοῖς ἐπετείοις οὐκ ἄλογον, οὐδ' ὁμοίως ἐφ' ὧν συμβαίνει θαυμαστόν (εἴπερ ἄρα συμβαίνει), καθάπερ ὅταν ἐκ πυρῶν αἶρα γένηται, διά τε τὸ πολλάκις γίνεσθαι, καὶ διὰ τὸ τὴν αἰτίαν οἴεσθαί πως (αἱ γὰρ ὑπερομβρίαι ποιοῦσιν)· εἰ δὲ καὶ ἐκ τῶν αἰρῶν εἰς πυροὺς πάλιν ἀποκαθίσταται, τοῦτο θαυμασιώτερον· εἴη δ' ἂν ὥσπερ ἀσθένειά τις ἢ νόσος γεγενημένη τοῦ σπέρματος, ἥτις ἀπολύεται, μεθισταμένων ἄρα τῶν περὶ τὸν ἀέρα καὶ τὴν τροφήν.

Compare also

Arist. *Meteor.* 338 a 22-5 περὶ τῶν στοιχείων τῶν σωματικῶν, πόσα τε καὶ ποῖα, καὶ τῆς εἰς ἄλληλα μεταβολῆς, καὶ περὶ γενέσεως καὶ φθορᾶς τῆς κοινῆς εἴρηται πρότερον. (Also 341 a 9 καὶ ἀεὶ ἄλλο καὶ ἄλλο γίγνεται ἕκαστον αὐτῶν (sc. τῶν στοιχείων).)

See also *ad* συμβαίνει ... εἰς ἄλληλα τὰς μεταβολάς, 5 b 23-6; ἐν τοῖς πρώτοις, 11 b 13.

μέν suggests that examples of similar changes based on shifts at the level of the elementary bodies occurring in other parts of the cosmos could be advanced (cp. πολλὰ δὲ καὶ ἐν τῷ ἀέρι τοιαῦτα καὶ ἐν ἄλλοις 11 b 16-7), but instead of further information we get καὶ ἕτερα δ' κ.τ.λ.: see below.

For the kind of phenomena Th. may have in mind, see

Arist. *Meteor.* 378 a 12-6 ὅσα μὲν οὖν ἔργα συμβαίνει παρέχεσθαι τὴν ἔκκρισιν ἐν τοῖς τόποις τοῖς ὑπὲρ τῆς γῆς, σχεδόν ἐστι τοσαῦτα καὶ τοιαῦτα. ὅσα δ' ἐν αὐτῇ τῇ γῇ, ἐγκατακλειομένη τοῖς τῆς γῆς μέρεσιν, ἀπεργάζεται, λεκτέον. (Aristotle is referring to the production of fossiles and metals.)

Ign. 18 καὶ ⟨ἡ⟩ ὑπὸ χιόνος δὲ τῆς γῆς ἀναζύμωσις (fermentation) καὶ γένεσις ἐν αὐτῇ τῇ χιόνι ζῴων ἐνίων. ἁπλῶς δὲ καὶ ἡ μεταβολὴ τῶν ἐν τῇ γῇ πάντων ἀπ' αὐτῶν ἀρξαμένοις τῶν ὑδάτων, ἐπεὶ καὶ ἡ ἀναθυμίασις (exhalation) καὶ ὁ ἀτμὸς πλείων οὐ μόνον διὰ τὴν παρουσίαν ἀλλὰ καὶ διὰ τὸν ἀθροισμὸν

[1] Another possibility would be that it should be conveived as an absolute genitive; μεθισταμένων without a complement also in Arist. *Meteor.* 365 a 32, with quite different reference: "as we move".

τοῦ θερμοῦ καὶ διὰ τὴν ἀντιπερίστασιν (intensification) ἅμα καθυγραινομένης.

The position of γίνονται suggests that **πρὸς ἄλλοτ' ἄλλο** should be connected with μεθισταμένων rather than with ἀλλοιώσεις καὶ μεταβολαί.[1] In either case the consequence is that these changes of the elementary bodies, under the influence of external changes, do not reveal a 'tendency towards the best', in sofar as they appear to be various and, one might say, unpredictable: see *ad* 10 b 3.

καὶ ἕτερα δ' οὐκ ὀλίγα παρόμοια τούτοις: a somewhat rhetorical formula to suggest that this list of meteorological and earthly phenomena exemplifying the difficulty involved in the idea that all things are for the sake of an end could be continued without much effort[2] (cp. πλείοσιν 10 a 28). The prefix in *παρ*όμοιος seems to stress the force of the adjective ("closely resembling" LSJ s.v.); cp. *Lap.* 26 καὶ ἔνιοί γε δὴ καὶ ὑπολαμβάνουσι τὴν αὐτὴν φύσιν εἶναι· καὶ γὰρ τὴν χρόαν παρόμοιαι τυγχάνουσιν.[3] The vividness of this suggestion is increased by the fact that καὶ ἕτερα *δ'* answers αἱ μὲν κ.τ.λ.

For καὶ ... δέ see *ad* 4 a 8; cp. *HP* II.4.4 καὶ ἐπ' ἄλλων δ' ἐστὶ τοῦτο πλειόνων.

10 b 7-11 ἔτι δ' ἐν αὐτοῖς τοῖς ζῴοις ... ἔν τισιν τόποις.

The argument that there are quite a number of phenomena which cannot be accounted for in terms of purpose or 'the better'—this in addition to the problem of the delimitation of teleological explanation as such (ἄλλως ὁ ἀφορισμὸς οὐ ῥᾴδιος, 10 a 23)—now turns to examples from the structure and life of animals themselves (**ἐν αὐτοῖς τοῖς ζῴοις**, compare ἐν αὐτῇ τῇ γῇ, 10 b 4),[4] whose generation was presumably already referred to in 10 b 3-4. **ἔτι δέ** as in 10 b 11, 10 b 20; this comparatively neutral connective (also without δέ) often appears in clusters, linking items in series of examples, problems,

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[1] That μεθίστασθαι allows of a prepositional adjunct appears from e.g. Arist. *Phys.* 247 b 13-4 ὅταν ἐκ τοῦ μεθύειν ἢ καθεύδειν ἢ νοσεῖν εἰς τἀναντία μεταστῇ τις κ.τ.λ.; also FHS&G 187.6-8 λέγει μέντοι Θεόφραστος ἐνίοτε καὶ εἰς τοὺς ἐναντίους μεθίστασθαι τοὺς ἀνέμους· ὅταν γὰρ εἰς τὸ ἐναντίον ἀπώσωνται τὰ νέφη, πάλιν ἐκεῖθεν ἄρχεσθαι τὸ πνεῦμα.

[2] Cp. 10 b 15-6.

[3] In other contexts however this aspect is not prominent; e.g. *HP* IV.11.12 σχεδὸν δέ τινές φασι καὶ τῶν λιμναίων ταύτην εἶναι τὴν διαφοράν, τὸ πολύφυλλον καὶ παρόμοιον ἔχειν τρόπον τινὰ τὸ φύλλον τῷ τοῦ κυπείρου καὶ φλεὼ καὶ θρύου καὶ βουτόμου· σκέψασθαι δὲ δεῖ τοῦτο.

[4] For discussion of these examples see Lennox (1985) 147 ff., 156 ff., Most (1988) 226 ff., and Repici (1990) 205 ff., referring to potential parallels from Aristotle's writings.

or arguments:[1] see e.g. *Sens.* 13, 15, 17, 19, 20 (2x); Arist. *Met.* B, 999 a 32, 999 b 4, 8, 13, 25.

μάταια, frustrating the expectation expressed by μηδὲν μάτην (10 a 22-3).[2] For **ὥσπερ** expressing that the following characterization presents itself see *ad* 4 a 11-2; cp. εἴ περ μὴ συμβάλλεται below.

τὰ μέν is not answered by τὰ δέ. The more far-reaching occurrence of parts damaging the animal follows in ἔτι δὲ κεράτων μεγέθη, καθάπερ τῶν ἐλαφῶν (τοῖσδε *καὶ λελωβημένων*...) 10 b 11-3.[3]

The first two examples derived from animal life (**τοῖς ἄρρεσιν οἱ μαστοὶ καὶ τοῖς θήλεσιν ἡ πρόεσις**), as the parallel phrasing suggests, belong together in some way—probably insofar as both involve a phenomenon which, although it has an obvious function in the other sex, is apparently without a function in this one.

Whereas the function of breasts in females is obvious enough, in the case of males the phenomenon does not sit well upon the tenet that nothing is in vain. Now as Most[4] points out, Aristotle (*PA* 688 a 19 ff.) did in fact ascribe a function to breasts in males: their fleshy substance serves the purpose of covering the zone around the heart. Still, apart from the fact that this explanation mainly seems to mirror Aristotle's embarrassment with regard to the phenomenon,[5] it may be doubted whether this explanation could be applied to, e.g., male elephants as well,[6] which are supposed to be endowed with small breasts like the females, located towards the armpits according to Aristotle, *HA* 500 a 20 ff. When Aristotle refers to the notion that the he-goat has two breasts near the penis (*HA* 522 a 14), he does not claim that this, too, could be accounted for as a kind of protection.

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[1] Bonitz 291 a 13-5 ἔτι s.v. "usitatissimum Aristoteli in enumerandis argumentis vel dubitationibus singula membra ordiri a part ἔτι δὲ vel ἔτι veluti intra idem caput".

[2] Cp. Arist. *GA* 788 b 20, quoted p. 487 *ad loc.*

[3] Note however the textual problems involved; see commentary *ad loc.*, pp. 504 ff. below.

[4] (1988) 226.

[5] Aristotle apparently tries to make plausible his case by picturing the nutritive function of the breasts in females as an *additional* function: ἐπὶ δὲ τῶν θηλειῶν παρακέχρηται καὶ πρὸς ἕτερον ἔργον ἡ φύσις, ὅπερ φαμὲν αὐτὴν πολλάκις ποιεῖν· ἀποτίθεται γὰρ ἐνταῦθα τοῖς γεννωμένοις τροφήν (*PA* 688 a 22 ff.).

[6] It may be noted that several kinds of male animals are in fact supposed to have breasts: see e.g. Arist. *PA* 688 b 30-3 ἄνθρωπος μὲν οὖν καὶ ὁ θῆλυς καὶ ὁ ἄρρην ἔχει μαστούς, ἐν δὲ τοῖς ἄλλοις ἔνια τῶν ἀρρένων οὐκ ἔχει, οἷον ἵπποι οἱ μὲν οὐκ ἔχουσιν οἱ δ' ἔχουσιν, ὅσοι ἐοίκασι τῇ μητρί.

As regards the example of female **πρόεσις** (< προΐεσθαι, "emission"), it is less obvious exactly what phenomenon this refers to: for discussion see Most (1988) 266-7. In any case the suggestion is that this phenomenon constitutes, somehow, the female counterpart of the emission of semen on the part of males (see above). At first sight, then, menstruation might seem to be the most likely candidate: see e.g.

> Arist. *GA* 727 a 2-4 ὅτι μὲν τοίνυν ἐστὶ τὰ καταμήνια περίττωμα καὶ ὅτι *ἀνάλογον* ὡς τοῖς ἄρρεσιν ἡ γονὴ οὕτω τοῖς θήλεσι τὰ καταμήνια φανερόν.
>
> *HA* 585 a 34 – b 1 ἀρχὴ δὲ ταῖς γυναιξὶ τοῦ τεκνοῦσθαι καὶ τοῖς ἄρρεσι τοῦ τεκνοῦν, καὶ παῦλα ἀμφοτέροις, τοῖς μὲν ἡ τοῦ σπέρματος πρόεσις ταῖς δ' ἡ τῶν καταμηνίων, πλὴν οὔτ' ἀρχομένων γόνιμα εὐθὺς οὔτ' ἔτι ὀλίγων γιγνομένων καὶ ἀσθενῶν.

The opinion that menstrual fluid is a kind of semen is rejected by Aristotle in *GA* 727 a 27 f., although, according to him, in the process of generation this fluid does serve some purpose, viz. in that it provides the *matter* required:

> Arist. *GA* 727 b 31-3 ὅτι μὲν οὖν συμβάλλεται τὸ θῆλυ εἰς τὴν γένεσιν τὴν ὕλην, τοῦτο δ' ἐστὶν ἐν τῇ καταμηνίων συστάσει ... δῆλον. (Cp. also 729 a 21 ff.).

So, if Th. is referring to menstruation, he is using as a counter-example against an over-all teleological explanation of the cosmos a phenomenon which is explicitly accounted for in terms of purpose or function by Aristotle himself.

Alternatively, the term πρόεσις might indicate, as Most argues, that Th. is referring to the process of menstruation rather than to the fluid.[1]

According to Aristotle, the emission of menstrual fluid may be conceived as a κάθαρσις of the residues which cause disease; thus it serves the health of the woman.[2] Here too, then, Th. is calling in question a teleological explanation of a phenomenon for which Aristotle gave one.[3]

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[1] "(...) considering the form of the word and its usage elsewhere, it is likelier that *proesis* here signifies, not the contents of the menstrual fluid, but instead the process of emitting it, so that Theophrastus is probably casting doubt not upon the function of the content of that particular menstrual emission which in Aristotle's theory goes toward making up the embryo, but rather upon the regular monthly menstrual flow when the mother is not pregnant." Most (1988) 227. But see Arist. *HA* 585 a 35 ff., where πρόεσις seems to refer to the phenomenon, not to the process of menstruation.

[2] So Most, *l.c.*: *GA* 738 a 11 ff.; 775 b 8-9.

[3] In order to avoid the consequence that Th. would have written this passage in ignorance of Aristotle's views, Most ((1988) 232-3; see also L-M *ad loc.*) suggests that our treatise might in fact be older than *PA* and *GA*, which in that case would provide the answers to the problems raised by Th. in the present passage. See *ad* 10 a 22-8, pp. 491-2.

A third possibility, however, is,[1] that Th. is referring to the vaginal discharge produced when the female is sexually active, which is connected with coition especially. Aristotle recognizes the phenomenon, and denies that this emission is a kind of semen:

Arist. *GA* 727 b 33 – 728 a 1 ὃ δ' οἴονταί τινες σπέρμα συμβάλλεσθαι ἐν τῇ συνουσίᾳ τὸ θῆλυ διὰ τὸ γίγνεσθαι παραπλησίαν τε χαρὰν ἐνίοτε αὐταῖς τῇ τῶν ἀρρένων καὶ ἅμα ὑγρὰν ἀπόκρισιν, οὐκ ἔστιν ἡ ὑγρασία αὕτη σπερματικὴ ἀλλὰ τοῦ τόπου ἴδιος ἑκάσταις. (Cp. also 739 b 2.)

739 a 20-1 ὅτι δ' ἡ γιγνομένη ὑγρότης μετὰ τῆς ἡδονῆς τοῖς θήλεσιν οὐδὲν συμβάλλεται εἰς τὸ κύημα εἴρηται πρότερον.

Since the phenomenon referred to should qualify as the counterpart of the emission of semen in males, the conclusion seems to be that Th. may have in mind either (a) menstruation, insofar as this was considered by Aristotle at least to be the female analogue of semen, or (b) the more occasional vaginal emission, which more obviously corresponds to semen by its occurring during sexual intercourse. The latter alternative is perhaps the more likely one; if so, the phenomenon belongs to those examples for which no teleological explanation is offered in Aristotle's works.

However this may be, the parenthesis **εἴπερ μὴ συμβάλλεται**[2] (sc. εἰς τὴν γένεσιν?) indicates that Th. himself reckons with the possibility that some (generative) function could be ascribed to the phenomenon referred to.

εἴπερ does not express anything with regard to the truth value either of the conditional clause or of the main clause as such, but as it were sets the scene for the main clause,[3] or indicates that what is said in the main clause (i.c. ματαίη ἐστί) applies to the extent that the condition expressed in the subordinate clause does; see e.g.

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[1] Most (*o.c.* 226): "if it is this that Theophrastus is referring to, he is calling into question a utility about which Aristotle says nothing at all. But against this latter interpretation it may be urged that the balance of this sentence seems to require a reference to an emission as common to all women as breasts are common to all men, while both times that Aristotle discusses this secretion he stresses that it is found only in some women, not in others". As we have argued above, however, the balance of that sentence might be mainly due to the observation that a phenomenon which has an obvious function in the one sex is found in the case of the other sex, too.

[2] As appears above, the verb συμβάλλεσθαι is used by Aristotle in the context of both phenomena: of menstruation, *GA* 727 a 3; of sexual discharge *GA* 739 a 20.

[3] See Bakker (1988) 211. *Contra* Most who ascribes to εἴπερ a "strongly dubitative force" (1988) 232, with reference to Denniston 478-8; also *contra* Repici (1990) 205, who, while rightly arguing that "[formulas like εἴ περ (or εἴπερ or εἴπερ μή)] introduce no doubt about what is being said", assumes that they "posses definitely positive value" instead; cp. *ibid.* 209. See also *ad* 10 b 19, p. 519 n. 1.

CP I.1.1 ὥστε τὸ σπέρμα μάτην ἂν εἴη μὴ δυνάμενον γεννᾶν, εἴπερ τούτου χάριν αἰεὶ τὸ σπέρμα καὶ πρὸς τοῦτο πέφυκεν (see *ad* 11 a 22-5).
Vent. 52 τάχα δὲ οὐδὲ τὸ ὅλον ἄτοπον τό γε τοιοῦτο, εἴπερ ἡ περίστασις ἀεὶ τῶν ἀνέμων εἰς τοὺς ἐφεξῆς καὶ πάλιν μεταβολὴ εἰς τοὺς ἐναντίους· ("This hypothesis may not be wholly mistaken if there is ..." tr. COUTANT/EICHENLAUB).
Plato *Phaedo* 107 C 1-4 ἀλλὰ τόδε γ', ἔφη [sc. ὁ Σωκράτης], ὦ ἄνδρες, δίκαιον διανοηθῆναι, ὅτι, εἴπερ ἡ ψυχὴ ἀθάνατος, ἐπιμελείας δὴ δεῖται οὐχ ὑπὲρ τοῦ χρόνου τούτου μόνον ἐν ᾧ καλοῦμεν τὸ ζῆν, ἀλλ' ὑπὲρ τοῦ παντός, ...
Arist. *Protr.* B 34 D. ὥστ' εἴπερ ψυχὴ μὲν σώματος ἄμεινον (ἀρχικώτερον γὰρ τὴν φύσιν ἐστί) ... δῆλον ὅτι ... (See *ad* 4 a 5-6, p. 79 above.)
Met. 996 a 22-4 τίνα γὰρ τρόπον οἷόν τε κινήσεως ἀρχὴν εἶναι ⟨ἐν⟩ τοῖς ἀκινήτοις ἢ τὴν τἀγαθοῦ φύσιν, εἴπερ ἅπαν ὃ ἂν ᾖ ἀγαθὸν καθ' αὑτὸ καὶ διὰ τὴν αὑτοῦ φύσιν τέλος ἐστὶν ... ;
1000 b 20 ἡ δὲ νῦν λεγομένη ἀπορία ἐστὶ διὰ τί τὰ μὲν τὰ δ' οὔ, εἴπερ ἐκ τῶν αὐτῶν ἐστίν.
EN 1165 b 14-5 ἢ οὐ δυνατόν, εἴπερ μὴ πᾶν φιλητὸν ἀλλὰ τἀγαθόν ("perhaps it is impossible to do so [sc. love a friend who has become a bad man], since only what is good is lovable" tr. RACKHAM);
DA 410 b 30 – 411 a 2 οὐχ οἷόν τε δὴ τοῖς φυτοῖς τοῦτο συμβαίνειν οὐδὲ τῶν ζῴων ἐνίοις, εἴπερ μὴ πάντα ἀναπνέουσιν· τοῦτο δὲ λέληθε τοὺς ὑπειληφότας. ("seeing that they do not all respire" tr. HICKS).
Ps.-Arist. *Lin. insec.* 970 a 33 – b 5 πάλιν εἰ τὸ κεκινημένον ἐν ᾧ χρόνῳ κινεῖται τὴν ὅλην ἐν τῷ ἡμίσει τὴν ἡμίσειαν κινηθήσεται, καὶ ἐν τῷ ἐλάττονι ἔλαττον ἢ τὴν ἡμίσειαν, ὥστ' εἰ μὲν ἐκ περιττῶν σύγκειται τῶν ἀτόμων τὸ μῆκος, ἀναιρεθήσεται ἡ μέση τομὴ τῶν ἀτόμων, εἴπερ ἐν τῇ ἡμίσει χρόνῳ τὸ ἥμισυ δίεισιν· ...
Also 11 b 10.

That the limitation expressed in the conditional clause quite often involves a point of view which the author himself does not subscribe to (see e.g. εἴπερ ἡ κυκλικὴ τοιαύτη 5 b 23, εἴπερ ἐφέσει τινὶ καὶ ὀρέξει 6 a 9) is not given with the value of εἴπερ as such.

The example of the female emission, then, seems to illustrate the predicament of the investigator who is aware that there is an end to explanation in terms of purpose, but who is not sure whether the phenomenon in question belongs to those for which a purpose can be found.[1] At the same time the suggestion of the parenthesis is that if a function or purpose were found, there would still be other examples which cannot be explained teleologically.

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[1] One might compare χαλεπὴ δὲ καὶ εἰς αὐτὸ τοῦθ' ἡ σύνεσις καὶ ἡ πίστις, ... ἐν τίνι ποιητέον τὸν ὅρον, 9 b 16-20.

For the next example, that of the growth of a beard (**πώγωνος ... ἔκφυσις**) in some animals (**ἐνίοις**): we should perhaps think of the case of the hippelaphus, which is mentioned by Aristotle for its peculiarity of having a beard beside the larynx (*HA* 498 b 34).[1] In the Aristotelian corpus no statement about the function of a beard is found, but Aristotle may have ascribed to it the same function which he ascribed to the growth of hair in general, viz. of providing protection.

It should be noted, however, that ἐνίοις does not necessarily imply that there are other animals in which the phenomenon would *not* be μάταιον; one might interpret the phrase as "ἡ πώγωνος ἔκφυσις found in some animals", with a vagueness of reference to be observed elsewhere in this passage. In fact this interpretation seems to be confirmed by **δέ**, which singles out the growth of a beard as opposed to the growth of hair in other places, as well as by ἢ *ὅλως* τρίχων ἔκφυσις *ἔν τισιν τόποις*—which suggests that in the case of beards, too, the issue is the growth of hair in this particular place rather than the occurrence of the phenomenon in the case of certain animals.

So here again, in his choice of a phenomenon illustrating the necessity to identify the limits set to teleological explanation, Th. is apparently not guided by those cases which feature in the Aristotelian treatises.

With **ἢ ὅλως τρίχων ἔκφυσις ἔν τισιν τόποις** Th. proceeds to a more comprehensive phenomenon; ὅλως indicates that πώγωνος (ἔκφυσις) relates to τρίχων ἔκφυσις as a species to a genus.[2]

Th. apparently regarded the growth of hair as an indication of the porousness of the skin,[3] and he just might be questioning here the function of, e.g., hair under the armpits—considering that the bad smell of sweat in that place is due to the lack of exposure to the air:

> *Sud.* 9 δυσώδεις δὲ οἱ τόποι καὶ τὰ ἐν αὐτοῖς ὅσα μὴ εὔπνοα· σήπεται γάρ, ἡ δὲ κακωδία σῆψίς τις. διὸ ὁ ἐκ τῶν μασχαλῶν ἱδρὼς καὶ ὅλως ὁ ἐκ τῶν κοίλων

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[1] It is just possible that the growth of beards in men is referred to: cp. Arist. *PA* 518 b 17 ff., where he says that in some (sc. men?: τοῖς μέν) the upper lip and chin are well covered with hair, while in others (τοῖς δέ) these parts are smooth and the cheeks less hairy. See however Arist. *An. Post.* 96 a 10-1 οὐ πᾶς ἄνθρωπος ἄρρην τὸ γένειον τριχοῦται, ἀλλ' ὡς ἐπὶ τὸ πολύ.

However, taking into account that Aristotle adds that smooth-chinned men are less liable to go bald than those growing a beard (*HA* 518 b 20), and since the brains constitute a part of men which deserves protection in particular (see *PA* 658 b 2 ff.; see also below), the growth of a beard appears actually to interfere with this superior goal—so that Th.' listing the growth of a beard amongst phenomena characterized as ὥσπερ μάταια would seem to be putting it mildly indeed.

[2] *Contra* R-F: "generally speaking".

[3] E.g. *Sud.* 9 δηλοῖ δὲ ἡ τῶν τριχῶν ἔκφυσις τὴν μανότητα.

κακωδέστατος· καίτοι μανοί γε οἱ τόποι, ἀλλ' ἡ κατάπνιξις καὶ ἡ κοιλία ποιεῖ τὴν κακωδίαν.

As was said above, Aristotle does ascribe a function to the growth of hair in general, viz. in that it provides a protection:

Arist. *PA* 658 a 18-24 σκέπης γὰρ χάριν αἱ τρίχες ὑπάρχουσι τοῖς ἔχουσιν· τοῖς μὲν οὖν τετράποσι τὰ πρανῆ δεῖται μᾶλλον τῆς σκέπης, τὰ δὲ πρόσθια τιμιώτερα μέν, ἀλλὰ λεάζει διὰ τὴν κάμψιν· τοῖς δ' ἀνθρώποις ἐπεὶ ἐξ ἴσου διὰ τὴν ὀρθότητα τὰ πρόσθια τοῖς ὀπισθίοις, τοῖς τιμιωτέροις ὑπέγραψεν ἡ φύσις τὴν βοήθειαν· ἀεὶ γὰρ ἐκ τῶν ἐνδεχομένων αἰτία τοῦ βελτίονός ἐστιν.

In the sequel (658 b 2 ff.) Aristotle is quite specific about the protection provided in each case: man is endowed with the hairiest head of all animals, partly ἐξ ἀνάγκης because hair is a "waste product" of fluid and heat (cp. e.g. Ps.-Arist. *Probl.* 893 b 17 ff.), and partly ἕνεκεν τῆς βοηθείας: hair provides shelter both from excessive cold and from excessive heat. Now since the human brain is the biggest and most fluid of all, it needs most protection. The eyelashes & eyebrows, in their turn, serve as a protection of the eyes (*ibid.* 658 b 14 ff.).[1]

Here, then, we have some testimony to indicate what kind of phenomenon Th. may have in mind; the vagueness of reference of ἔν τισιν τόποις, however, contributes to the impression that it is not the specific example that counts, but that the growth of hair belongs to those phenomena of which an explanation in functional terms may reasonably be questioned—even in those cases where Aristotle did provide one.

10 b 11-3 **ἔτι δὲ κεράτων μεγέθη ... τῶν ὀμμάτων**

τοῖς δὲ JCLA; τοισδε P; τοῖσδε Usener (1891) 261; τοῖς ⟨οὐκ ὠφελουμένοις, τοῖς⟩ δὲ R-F.[2]
λελωβημένων PJCL, Usener (*l.c.*); λελωβωμένοις A Isḥāq.
κνήσει Usener (*l.c.*); κινήσει MSS.

In spite of the textual difficulties involved, the purport of this sentence is sufficiently clear: as a further example suggesting that the limits of teleological explanation have been reached one may advance the huge horns of, e.g., deer, which are actually impaired by them. The phrasing of **κεράτων**

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[1] Accordingly, the beard might be supposed to provide a protection of lips and throat alike; but, as said above, in his treatises Aristotle does not say so.
[2] The addition makes R-F diverge from Usener's page- and line numbers down to 11 a 13.

μεγέθη brings out that the hindrance is not so much in the phenomenon as such (as in the previous cases), but in the bulk of the thing.[1] This in itself suggests that this next example introduced by **ἔτι δέ** is of a different type from the examples above, in that the phenomenon is not just in vain (μάταια 10 b 8) but actually a hindrance to the animals concerned.

The manuscript reading τοῖς δέ makes the observation a more complex one, concerning two different groups of animals. The absence of τοῖς μέν is not problematic;[2] καθάπερ τῶν ἐλάφων provides a natural reference. The beginning of the sentence could be paraphrased as "And again, <one might advance as an example of things which are μάταια> enormous horns such as those of deer", which seems to demand a continuation such as "and the fact that others have actually been injured by them ...", which, however, is not provided in τοῖς δὲ ... λελωβημένοις.[3]

R-F' suppletion of <οὐκ ὠφελουμένοις, τοῖς> makes explicit the counterpart suggested by τοῖς δέ; with this addition καθάπερ τῶν ἐλάφων has the nature of a parenthesis: the oversized horns (such as those of deer) are of no use, or, in some cases, actually harmful to the animals endowed with them. The somewhat loose interpretation of the dative ("and again the size of the horns, as in deer, for those that are not benifited by them, ..."), however, does not fit the second dative.[4]

The alternative of construing the first dative with an implicit (ὥσπερ) μάταια is precluded by the inconsistency of this construction with τοῖς δὲ καὶ λελωβημένοις.

It seems best, then, to adopt the reading **λελωβημένων**, with which the whole sentence regards the example of the horns of deer, so that ἔτι δέ introduces a transition to attributes which are an actual hindrance to their bearers, while **καί** marks a stronger claim than that about the previous, merely useless phenomena. For the perfect tense of **λελωβημένων**[5] compare e.g.

Plato *Gorg.* 511 A 1-3 οὐκοῦν τὸ μέγιστον αὐτῷ κακὸν ὑπάρξει μοχθηρῷ ὄντι τὴν ψυχὴν καὶ λελωβημένῳ διὰ τὴν μίμησιν τοῦ δεσπότου καὶ δύναμιν.

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[1] For the idea that the right (or as Arist. *HA* 611 b 30 has it, the left) horn of deer is useful to men because of some medicinal property—for which reason it is said to be buried by the deer, see the testimonies for Th.' treatise *On Creatures Said to be Grudging*, 362A, C and D FHS&G (καὶ ὁ ἔλαφος τὸ δέξιον κατορύττει κέρας, πρός τε τὰ τῆς φρύνης φάρμακα (toad's-poison) καὶ πρὸς ἄλλα πολλὰ χρήσιμον. 362 A.3-5, = Phot. *Bibl.* 278).

[2] See e.g. GILDERSLEEVE 219 ff.

[3] According to Aristotle deer, too, are actually injured by the size of their horns: see below.

[4] Surely τοῖς δέ can hardly be rendered by the bracketed "(*while* some have even been injured by ...)" (R-F, REALE/CATAN; italics added).

[5] See LSJ s.v. II.

This leaves us with the problem of τοῖς δέ. USENER's proposal of **τοῖσδε** (sc. τοῖς κέρασι, indicating the instrument by which the injury is incurred, whereas the way in which the damage is done is specified by the three following datives)[1] seems to be functional insofar as a second explicit reference to the horns would be welcome in view of the phrase κεράτων μεγέθη ("enormous horns"), which focusses primarily on the bulk of these attributes. Although the prounoun ὅδε with reference to an entity mentioned in what precedes yields a vividness of description which is slightly surprising,[2] in view of the somewhat informal style of the context τοῖσδε seems to be the best option.

For passages in *PA* in which Aristotle likewise comments upon the uselessness and the disadvantages of horns, see LENNOX (1985) 148-9, MOST (1988) 227-8.

According to Aristotle, the use of horns in general is for self-defence and attack (βοηθείας ... καὶ ἀλκῆς χάριν, *PA* 662 b 27). Just like antelopes and gazelles, however, deer are protected by their speed (663 a 10), and when the growth of horns of these animals is called useless, this seems to be based on an *a priori* assumption of Aristotle that an animal is endowed with only a single adequate means of protection:

> Arist. *PA* 663 a 8-18 ὅσοις δ' ἄχρηστος πέφυκεν ἡ τῶν κεράτων ἐξοχή, τούτοις προστέθεικεν ἑτέραν βοήθειαν ἡ φύσις, οἷον ταῖς μὲν ἐλάφοις τάχος (τὸ γὰρ μέγεθος αὐτῶν καὶ τὸ πολυσχιδὲς (the numurous branches) μᾶλλον βλάπτει ἢ ὠφελεῖ), καὶ βουβάλοις δὲ καὶ δορκάσι (πρὸς ἔνια μὲν γὰρ ἀνθιστάμενα τοῖς κέρασιν ἀμύνονται, τὰ δὲ θηριώδη καὶ μάχιμα ἀποφεύγουσι), τοῖς δὲ βονάσοις (καὶ γὰρ τούτοις γαμψὰ τὰ κέρατα πέφυκε πρὸς ἄλληλα) τὴν τοῦ περιττώματος ἄφεσιν· τούτῳ γὰρ ἀμύνεται φοβηθέντα· καὶ ταύτῃ δὲ τῇ προέσει διασῴζεται ἕτερα. ἅμα δ' ἱκανὰς καὶ πλείους βοηθείας οὐ δέδωκεν ἡ φύσις τοῖς αὐτοῖς.

The idea seems to be that, although sometimes these animals defend themselves by means of their horns (for antelopes and gazelles, *PA* 663 a 13; for deer *HA* 611 b 5 οἷς ἀμύνεται), they have recourse to their capacity for speed whenever they are in serious danger. (All the same they derive confidence from this means of protection: see *HA* 611 b 15, below.)

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[1] Cp. e.g. 7 a 12-3, 9 a 4-6.

[2] "(ὅδε wird) auf *schon erwähntes* bezogen, indem der Redende sich dasselbe *vergegenwärtigt* oder etwas *Vergangenes* in seine Gegenwart herüberzieht und es als etwas *Gegenwärtiges* gleichsam vor Augen stellt", K-G II.1. 646-7. See e.g. Soph. *El.* 1190 ff. ὁθούνεκ' εἰμὶ τοῖς φονεῦσι σύντροφος. / [ ] τοῖς τοῦ; πόθεν τοῦτ' ἐξεσήμηνας κακόν; / [ ] τοῖς πατρός· εἶτα τοῖσδε δουλεύω βίᾳ.

For his emendation **κνήσει** USENER (1891) 261 refers to Arist. *HA* 611 b 15-7, where it is reported that deer after losing their antlers leave their place of refuge only when the new horns are hardened so much that rubbing them against trees does not hurt anymore (ὅταν δὲ μηκέτι πονῶσι πρὸς τὰ δένδρα κνώμενοι αὐτὰ (sc. τὰ κέρατα), τότ' ἐκλείπουσι τοὺς τόπους τούτους διὰ τὸ θαρρεῖν ὡς ἔχοντες ᾧ ἀμυνοῦνται.).

παραιωρήσει (from παραιωρέω "hang up beside") probably: "'by being hung up by their horns', *sc.* through these catching on trees and the like", R-F *ad loc.*[1]

ἐπιπροσθήσει τῶν ὀμμάτων, here obviously with an 'objective' genitive, contrast ἡ τῆς γῆς ἐπιπρόσθησις (causing an eclipse: e.g. Arist. *Cael.* 297 b 29) or *Vent.* 30 δι' ἐπιπρόσθησίν τινων (winds are prevented from blowing "by interposition of obstacles" COUTANT/EICHENLAUB).

This example, then, pictures vividly the inconvenience or worse suffered by deer on account of the size of their horns, in a way unaffected by Aristotle's considerations on the subject, as a phenomenon for which it is not only difficult to find a teleological explanation, but which actually testifies to the opposite of an explanation in terms of a purpose or 'the good'.

10 b 13-6 καὶ ὡς ἔνια ... τοιαῦτα.

The obviousness of the next examples, the copulation of the heron and the life of the day-fly, is stressed by **δή**; here again, the examples seem to be chosen with a taste for the telling fact, while the style is somewhat informal (cp. *ad* τοῖσδε 10 b 12), as in the somewhat loose the connection **καὶ ὡς** ... ("and the way in which ..."); compare

> *Lap.* 6 αἱ μὲν οὖν κατὰ τὰ χρώματα καὶ τὰς σκληρότητας καὶ μαλακότητας καὶ λειότητας καὶ τἆλλα τὰ τοιαῦτα (sc. διαφοραί), δι' ὧν τὸ περιττόν, πλείοσιν ὑπάρχουσι καὶ ἐνίοις γε κατὰ τόπον ὅλον. ἐξ ὧν δὴ καὶ διωνομασμέναι λιθοτομίαι Παρίων τε καὶ Πεντελικῶν καὶ Χίων τε καὶ Θηβαϊκῶν, *καὶ ὡς* ὁ περὶ Αἴγυπτον ἐν Θήβαις ἀλαβαστρίτης,—καὶ γὰρ οὗτος μέγας τέμνεται,—καὶ ὁ τῷ ἐλέφαντι ὅμοιος ὁ χερνίτης καλούμενος, κ.τ.λ.

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[1] A metaphorical use of the noun occurs in Arist. *Cael.* 306 a 21 where the author is criticizing the Platonic theory of elementary shapes: συμβαίνει δ' αὐτοῖς μάλιστα τὴν γῆν εἶναι στοιχεῖον, καὶ μόνην ἄφθαρτον, εἴπερ τὸ ἀδιάλυτον ἄφθαρτόν τ' ἐστὶ καὶ στοιχεῖον· ἡ γὰρ γῆ μόνη ἀδιάλυτος εἰς ἄλλο σῶμα—ἀλλὰ μὴν οὐδ' ἐν τοῖς διαλυομένοις ἡ τῶν τριγώνων παραιώρησις ("the suspension of triangles in space" tr. GUTHRIE) εὔλογος. συμβαίνει δὲ καὶ τοῦτο ἐν τῇ εἰς ἄλληλα μεταβάσει διὰ τὸ ἐξ ἀνίσων τῷ πλήθει συνεστάναι τριγώνων. The idea seems to be that the surplus of the bodies is left unused, 'floating in the air', as it were: cp. Simpl. 647.9-13 *ad loc.*: εἰ γὰρ τὸ μὲν ὕδωρ ἐξ εἴκοσι τριγώνων ἰσοπλεύρων ἐστίν, ὁ δὲ ἀὴρ ἐξ ὀκτώ, ἐὰν ἐξ ὕδατος διαλυθέντος ἀὴρ γίνηται, ἑνὸς ὑδατίου σώματος εἰς εἴκοσι

The verbal phrases **ὥσπερ ὁ ἐρφδιὸς ὀχεύει** and (ὥσπερ ...) **τὸ ἡμερόβιον ζῇ** instead of nominal equivalents, too, suggest the eye of the observer.

The examples are of the same kind as the previous ones in that they are obviously beyond the boundary where an explanation in terms of purpose applies. For the painful copulation of the ash-coloured heron, see

> Arist. *HA* 609 b 23-5 τούτων (sc. τῶν ἐρωδιῶν) ὁ πέλλος χαλεπῶς εὐνάζει καὶ ὀχεύει· κράζει τε γὰρ καὶ αἷμα, ὥς φασίν, ἀφίησιν ἐκ τῶν ὀφθαλμῶν ὀχεύων, καὶ τίκτει φαύλως καὶ ὀδυνηρῶς.

This way of copulation is obviously **βίᾳ** insofar as the heron suffers physical pain, not in the sense that external constraint is involved. Compare

> *Sens.* 84 ἡδὺ δὲ καὶ λυπηρόν, [Plato explains] τὸ μὲν εἰς φύσιν ἀθρόον πάθος, τὸ δὲ παρὰ φύσιν καὶ βίᾳ, τὰ δὲ μέσα καὶ ἀναίσθητα ἀνὰ λόγον.
>
> Ps.-Arist. *MM* 1188 a 38 – b 11 πρότερον τοίνυν ἂν εἴη λεκτέον ὑπὲρ βίας καὶ ὑπὲρ ἀνάγκης. ἡ μὲν γὰρ βία ἐστὶ καὶ ἐν τοῖς ἀψύχοις. ἑκάστοις γάρ ἐστι τῶν ἀψύχων οἰκεῖος τόπος ἀποδεδομένος, τῷ μὲν πυρὶ ὁ ἄνω, τῇ δὲ γῇ ὁ κάτω· ἔστι μέντοι γε βιάσασθαι καὶ τὸν λίθον ἄνω φέρεσθαι καὶ τὸ πῦρ κάτω. ἔστι δὲ καὶ τὸ ζῷον βιάσασθαι, οἷον ἵππον ἐπ' ὀρθὸν θέοντα ἀντιλαμβανόμενον ἀποστρέψαι. ὅσοις μὲν οὖν ἐστὶν ἐκτὸς ἡ αἰτία τοῦ παρὰ φύσιν τι ἢ παρ' ἃ βούλονται ποεῖν, ἐροῦμεν βιαζομένοις ἃ ἂν ποιῶσι ποιεῖν· *ἐν οἷς δ' ἐν αὐτοῖς ἐστὶν ἡ αἰτία, οὐκέτι τούτους βιάζεσθαι ἐροῦμεν*. εἰ δὲ μή, ὁ ἀκρατὴς ἀντερεῖ, οὐ φάσκων φαῦλος εἶναι· βιαζόμενος γὰρ φήσει ὑπὸ τῆς ἐπιθυμίας τὰ φαῦλα πράττειν.[1]

The presupposition that in the case of natural entities what is painful must be forced upon them and can only be against their nature holds especially on the supposition that nature involves a tendency towards the best; see the objection brought forward by Th. against Anaxagoras' thesis that sense perception is universally accompanied by pain:

> *Sens.* 31-2 ἡ μὲν γὰρ αἴσθησις κατὰ φύσιν, οὐδὲν δὲ τῶν φύσει βίᾳ καὶ μετὰ λύπης, ἀλλὰ μᾶλλον μεθ' ἡδονῆς, ὅπερ καὶ φαίνεται συμβαῖνον. τὰ γὰρ πλείω καὶ πλεονάκις ἡδόμεθα καὶ αὐτὸ δὲ τὸ αἰσθάνεσθαι χωρὶς τῆς περὶ ἕκαστον ἐπιθυμίας διώκομεν. (32) ἔτι δ' ἐπεὶ καὶ ἡδονὴ καὶ λύπη γίνεται διὰ τῆς αἰσθήσεως, ἅπαν δὲ φύσει πρὸς τὸ βέλτιόν ἐστι, καθάπερ ἡ ἐπιστήμη, μᾶλλον ἂν εἴη μεθ' ἡδονῆς ἢ μετὰ λύπης.

The fact that in this case no external force is involved may explain the use of **ἢ** (which may introduce a restriction: "or anyway") **παρὰ φύσιν**. Still, a pro-

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τρίγωνα διαλυθέντος δύο γίνεται ἀέρος, καὶ τὰ τέσσαρα τρίγωνα *παραιωρεῖται, ὡς ἂν εἴποι τις, μάτην*. (see also 647.9).

[1] Cp. Regenbogen's suggestion that a differentiation between the terms βία and ἀναγκή as exemplified in the *Magna Moralia* reveals Theophrastean influence (1491). However, the point is made also in Arist. *EN* 1110 b 1 ff. (ἔοικε δὴ τὸ βίαιον εἶναι οὗ ἔξωθεν ἡ ἀρχή, μηδὲν συμβαλλομένου τοῦ βιασθέντος 1110 b 15-7).

cess of procreation which normally[1] involves pain must be in violation of nature; the paradox involved in this example seems apt to raise the fundamental question of what is 'natural' and what is not.[2]

The paradox is even stronger in the second example offered by Th., (ὥσπερ ...) τὸ ἡμερόβιον ζῇ: the reference is doubtless to the day-fly which Aristotle invariably calls ἐφήμερον;[3] see e.g.

Arist. *HA* 552 b 21-3 ζῇ δὲ καὶ πέτεται μέχρι δείλης, καταφερομένου δὲ τοῦ ἡλίου ἀπομαραίνεται, καὶ ἅμα δυομένου ἀποθνήσκει βιῶσαν ἡμέραν μίαν, διὸ καὶ καλεῖται ἐφήμερον.

Fragile as the insect is, its life, while it lasts, is not known—and was not in antiquity considered—to be particularly painful: the verb ἀπομαραίνεσθαι used by Aristotle to describe its pining away as the sun drops is used of "a tranquil death"[4] in

Xen. *Apol.* 7 ὅταν γὰρ ἄσχημον μὲν μηδὲν μηδὲ δυσχερὲς ἐν ταῖς γνώμαις τῶν παρόντων καταλείπηται ⟨τις⟩, ὑγιὲς δὲ τὸ σῶμα ἔχων καὶ τὴν ψυχὴν δυναμένην φιλοφρονεῖσθαι ἀπομαραίνεται, πῶς οὐκ ἀνάγκη τοῦτον ποθεινὸν εἶναι;

ὥσπερ, then, does not imply a reference to the way of life of the day-fly, but serves as a vivid introduction ("the way in which"): cp. above. Its short life is peculiar to the day-fly (τούτῳ γὰρ ... κατὰ τὸν βίον συμβαίνει τὸ ἴδιον, ὅθεν καὶ τὴν ἐπωνυμίαν ἔχει, Arist. *HA* 490 b 1-2): it only lives to die, as it were. This life is βίᾳ in sofar as it is 'unnatural', in the sense of going against a natural impulse to live.[5] Compare

Arist. *Met.* 1015 a 26-33 ἔτι τὸ βίαιον καὶ ἡ βία (sc. ἀναγκαῖον λέγεται)· τοῦτο δ' ἐστὶ τὸ παρὰ τὴν ὁρμὴν καὶ τὴν προαίρεσιν ἐμποδίζον καὶ κωλυτικόν· τὸ γὰρ βίαιον ἀναγκαῖον λέγεται, διὸ καὶ λυπηρόν, ... καὶ ἡ βία ἀνάγκη

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[1] Contrast *Phys.* 230 a 26 – b 3, where Aristotle is speaking about accidental occurrences of violent generation: καὶ ἐπὶ γενέσεως δὲ καὶ φθορᾶς ὁ αὐτὸς λόγος· οὔτε γὰρ ἡ μὲν γένεσις κατὰ φύσιν ἡ δὲ φθορὰ παρὰ φύσιν (...), οὔτε γένεσιν ὁρῶμεν τὴν μὲν κατὰ φύσιν τὴν δὲ παρὰ φύσιν. ἢ εἰ ἔστι τὸ βίᾳ παρὰ φύσιν, καὶ φθορὰ ἂν εἴη φθορᾷ ἐναντία ἡ βίαιος ὡς παρὰ φύσιν οὖσα τῇ κατὰ φύσιν; ἆρ' οὖν καὶ γενέσεις εἰσὶν ἔνιαι βίαιοι καὶ οὐχ εἱμαρμέναι, αἷς ἐναντίαι αἱ κατὰ φύσιν, καὶ αὐξήσεις βίαιοι καὶ φθίσεις, οἷον αὐξήσεις αἱ τῶν ταχὺ διὰ τρυφὴν ἡβώντων, καὶ οἱ σῖτοι οἱ ταχὺ ἁδρυνόμενοι καὶ μὴ πιληθέντες; ("e.g. the rapid growth to maturity of profligates and the rapid ripening of corn when not packed close in the earth?", *RevOT*).

[2] See also 10 b 20 – 11 a 1 below, with commentary; Introduction, pp. 27 and 32 above.

[3] In fact, in our passage the less common name may have been chosen intentionally because of the somewhat paradoxical collocation τὸ ἡμερόβιον ζῇ—which in itself seems to elicit the question what sense there can be reasonably in a life that lasts only a single day.

[4] LSJ s.v.

[5] So that in the case of this example, too, the use of ἤ is significant: cp. above.

ἀμετάπειστόν τι εἶναι, ὀρθῶς· ἐναντίον γὰρ τῇ κατὰ τὴν προαίρεσιν κινήσει καὶ κατὰ τὸν λογισμόν.

καὶ ἕτερα ... τοιαῦτα: see *ad* 10 b 6-7. One might compare 362A.19-20 FHS&G πολλὰ δὲ καὶ ἄλλα πράττεται τοῖς ἀλόγοις ὧν οὐκ ἔχομεν λόγον ἀποδοῦναι· οἷον διὰ τί ἡ ὄρνις ὅταν τέκῃ περιρρίπτει τὰ κάρφη; (κ.τ.λ.). The phrasing is more positive than elsewhere, e.g. in *Lap.* 60 τὰ μὲν οὖν τοιαῦτα τάχ' ἄν τις λάβοι πλείω, *HP* I.11.6 ἀλλὰ τὰς μὲν τοιαύτας διαφορὰς τάχ' ἄν τις λάβοι πλείους, VII.15.3 πολλὰ δ' ἄν τις ἴσως λάβοι καὶ ἕτερα περιττά.

10 b 16-9 καὶ τὸ μέγιστον δὴ ... ἀνάγκας.

For **τὸ μέγιστον** see *ad* μείζω 4 a 9. The main example (see below) is also the most generally accepted one (**καί μάλιστα δοκοῦν**):[1] compare e.g.

> Arist. *Top.* 105 b 10-2 ἔτι ὅσα ἐπὶ πάντων ἢ τῶν πλείστων φαίνεται, ληπτέον ὡς ἀρχὴν καὶ δοκοῦσαν θέσιν· τιθέασι γὰρ οἱ μὴ συνορῶντες ἐπί τινος οὐχ οὕτως.

This example involves the relevant facts regarding the nutrition and generation of animals (**περὶ τὰς τροφὰς καὶ γενέσεις τῶν ζῴων**); it seems to be implied by **ταῦθ'** in the sequel that we should understand (sc. τὰ) περὶ τὰς τροφάς. The phenomena at issue are qualified as being for the sake of nothing (οὐθενὸς ... ἕνεκα), which means that they are actually beyond the limits set to τὸ πάνθ' ἕνεκά του which were said to be difficult to find (10 a 22-3). It may be noted that τὸ μέγιστον makes the present statement more positive than the sentence introducing this problem at 10 a 25 ff. (τῷ μὴ δοκεῖν ἔχειν οὕτως); as appears from **ἀλλὰ συμπτώματα καὶ δι' ἑτέρας ἀνάγκας** we now reach the phenomena referred to in that passage (συμπτωματικῶς, ἀνάγκῃ τινί 10 a 26-7); this is presumably also why they are designated as the main example (τὸ μέγιστον, above). The question what exactly Th. is referring to is not easily answered,[2] especially since the justification of this assertion in what follws (ἔδει γάρ, εἴπερ τούτων χάριν, ἀεὶ κατὰ ταὐτὰ καὶ ὡσαύτως) is not unambiguous either.

It may be inferred from the conjunction of **τὰς τροφὰς καὶ γενέσεις τῶν ζῴων** that in the case of τροφαί, too, the process conditional to the continua-

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[1] "δοκεῖ, δοκοῦντα usurpatur de iis opinionibus, quae communi hominum consensu comprobantur" Bonitz 203 a 27 ff. s.v.

[2] See Lennox (1985) 157-8; Most (1988) 228-9.

tion of life is referred to, rather than the activity of taking food.[1] So viewed, there is certainly a case for the supposition that, at least among other forms of nutrition, reference is to the phenomenon of gestation.[2] This interpretation, which has the advantage of providing an explanation for the somewhat curious word order (τροφαί preceding γενέσεις), is apparently supported by *GA* 777 b 17 ff. where Aristotle is discussing differences in the length both of pregnancy and of gestation (ἡ κύησις), and where the latter is referred to also as the "internal nourishment" (ἡ ἔσωθεν τροφή 778 a 10 f.). One may rather compare, however,

> Arist. *DA* 415 a 22 – b 2 ὥστε πρῶτον περὶ τροφῆς καὶ γεννήσεως λεκτέον· ἡ γὰρ θρεπτικὴ ψυχὴ καὶ τοῖς ἄλλοις ὑπάρχει, καὶ πρώτη καὶ κοινοτάτη δύναμίς ἐστι ψυχῆς, καθ' ἣν ὑπάρχει τὸ ζῆν ἅπασιν. ἧς ἐστὶν ἔργα γεννῆσαι καὶ τροφῇ χρῆσθαι· φυσικώτατον γὰρ τῶν ἔργων τοῖς ζῶσιν, ὅσα τέλεια καὶ μὴ πηρώματα, ἢ τὴν γένεσιν αὐτομάτην ἔχει, τὸ ποιῆσαι ἕτερον οἷον αὐτό, ζῷον μὲν ζῷον, φυτὸν δὲ φυτόν, ἵνα τοῦ ἀεὶ καὶ τοῦ θείου μετέχωσιν ᾗ δύνανται· πάντα γὰρ ἐκείνου ὀρέγεται, κἀκείνου ἕνεκα πράττει ὅσα πράττει κατὰ φύσιν.

The reason for the order of these terms, then, may rather be that reproduction is considered to be the τέλος of the organism: cp. *CP* I.16.6 καίτοι γε τοῦτο τέλος, ἐν τοῖς σπέρμασιν ...

However this may be, as far as Th.' ideas about the nutrition and generation of animals are concerned, we will have to make do with occasional remarks in the botanical treatises. In *CP*, where Th. describes the influence of temperature on the nourishment and generation of plants, he adds that similar phenomena occur in the case of animals, too:

> *CP* II.6.2 ὑπερβολὴ δέ τίς ἐστιν ἴσως καὶ τοῦ ψυχροῦ, καὶ πρὸς τροφὴν καὶ πρὸς γένεσιν (ὥσπερ καὶ ἐπὶ τῶν ζῴων), εἴπερ ἀφαιρεῖται τὴν τοῦ θερμοῦ δύναμιν, ἀφαιρεῖται καὶ τὴν ζωήν· (Th. goes on to describe differences between animals and plants in this respect);

and as a matter of fact in what precedes, where Th. argued that cold water (rain) and cold air (winds) are better than hot water and air, the influence of temperature on the development of the organism is described in terms of ἀνάγκαι:

> *CP* II.6.1 τῶν δὲ ποτίμων τὰ ψυχρὰ βέλτιστα, καὶ γὰρ πέψιν ποιεῖ μάλιστα, διὰ τὴν ἀντιπερίστασιν ("concentration") τοῦ θερμοῦ, καὶ κατάψυξιν ταῖς

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[1] In any case, the term does not refer to the food itself, the point at issue being apparently that these processes are not only due to tendencies in the nature of the animal but subject to external factors—among which the food they take: see below.

[2] See Most (1988) 229.

ῥίζαις, δεῖται δὲ τὰ δένδρα ταύτης. ... ἔοικεν δὲ κατὰ λόγον ἔχειν, ὥσπερ καὶ ἐπὶ τῶν ἐκ Διὸς ὑδάτων τὰ νυκτερινὰ καὶ τὰ βόρεια, καὶ ἐπ' αὐτῶν δὲ τῶν πνευμάτων ὅταν τὰ βόρεια καὶ μὴ νότια, καὶ ὅλως ὅταν ψυχρὰ καὶ μὴ θερμά· τὴν γὰρ αὐτὴν ὄνησιν πάντα ἔχει, καὶ *διὰ τὰς αὐτὰς ἀνάγκας*· τὰ ⟨δὲ⟩ θερμὰ διαχεῖ καὶ ἀνυγραίνει καὶ ἀσθενὲς ποιεῖ τὸ σύμφυτον θερμόν.[1]

So animals, too, are considered to benefit from or, where there is excess, to be harmed by external conditions not only with regard to generation but also to nutrition. A similar idea is found in Aristotle: EINARSON/LINK (*ad CP* II.6.1) refer to

Arist. *GA* 767 a 28-35 διαφέρει δὲ καὶ χώρα χώρας εἰς ταῦτα καὶ ὕδωρ ὕδατος διὰ τὰς αὐτὰς αἰτίας· ποιὰ γάρ τις ἡ τροφὴ γίγνεται μάλιστα καὶ τοῦ σώματος ἡ διάθεσις διά τε τὴν κρᾶσιν τοῦ περιεστῶτος ἀέρος καὶ τῶν εἰσιόντων, μάλιστα δὲ διὰ τὴν τοῦ ὕδατος τροφήν· τοῦτο γὰρ πλεῖστον εἰσφέρονται, καὶ ἐν πᾶσίν ἐστι τροφὴ τοῦτο, καὶ ἐν τοῖς ξηροῖς. διὸ καὶ τὰ ἀτέραμνα ὕδατα[2] καὶ ψυχρὰ τὰ μὲν ἀτεκνίαν ποιεῖ τὰ δὲ θηλυτοκίαν.

For Th. the point seems to be that animals and plants, whose natural characteristics are due to a special mix of δυνάμεις, the most important one of which is τὸ θερμόν, are subject to external influences of a more immediate character such as food, soil, and climate. Such more or less occasional influences affecting the nature of the animal or plant also appear in

CP II.13.5 (what happens in grain is the same as what happens in trees:) ἐπεὶ τό γε γινόμενον ταὐτό, παραιρεῖται (sc. the region) γὰρ ἀεὶ τῆς φύσεως, ἐπικρατῶν ὡσαύτως ἀμφοῖν. ξυμβαίνει γὰρ τοῦτο καὶ ἐπὶ τῶν ζῴων, ἐκ μελάνων γὰρ καὶ λευκὰ γίνεται, καὶ ἐκ τραχέων μαλακά, καὶ ἄλλας τοιαύτας ἔχοντα μεταβολάς. αἴτιον δὲ ἐνταῦθα δοκεῖ τῶν μέν, φανερὸν εἶναι, τὸ ὕδωρ, τῶν δέ, καὶ ὅλως αἱ τροφαὶ καὶ ὁ ἀήρ· ὥστε κἀκεῖ χρὴ νομίζειν, καὶ εἴ που ἄλλοθι τοιοῦτόν τι συμβαίνει, τὰς αὐτὰς εἶναι καὶ παραπλησίας *ἀνάγκας*. τὰ δὲ καθ' ἕκαστα μᾶλλον, ἴσως δὲ καὶ μόνως, ἄν τις ἀποδοίη τὴν ἐμπειρίαν προσλαβὼν χώρας καὶ τόπου διὰ τῆς ἱστορίας.

359A.12-9 FHS&G (= Photius. *Bibl.* 278, from Th.' *On creatures that Appear in Swarms*) ὅτι μᾶλλον μετὰ τὰς διαλύσεις καὶ τῶν πανηγύρεων καὶ τῶν στρατοπέδων, ἢ ἔτι συνισταμένων αἱ μυῖαι γίνονται. συμβαίνει γὰρ παρόντων μὲν διὰ τὰς καθημερινὰς χρείας καὶ κινήσεις φθείρεσθαι τὰς γενέσεις αὐτῶν, κινήσεως ἀεὶ καὶ μεταβολῆς γινομένης, ὡς καὶ ἐν τοῖς ἄλλοις, καὶ ἐν αὐτοῖς τοῖς καθάρμασιν ἐκβαλλομένοις αὐτῶν· ὅταν δὲ διαλυθῶσιν, ἡσυχίας γινομένης ταχὺ συντελεῖται διὰ τὸ μὴ ὑπ' οὐδενὸς κωλύεσθαι, μέχρις οὗ ἂν ξηρανθῇ τὸ ἐν τοῖς καθάρμασιν ὑγρόν. (...) 40-3 ὅτι τῶν ὄφεων δύο

[1] Cp. *CP* I.1.3 ἀεὶ γὰρ τὸ μέλλον βλαστάνειν ἔχειν τε δεῖ τὴν ἔμβιον ὑγρότητα καὶ ταύτην δύνασθαι τηρεῖν. τὰ δὲ φύσει ξηρά, διὰ τὸ ὀλίγην ἔχειν, ὅταν ἀπὸ τοῦ δένδρου ἀφαιρεθῇ, ταχὺ διαπνεῖται καὶ ἀτμίζεται συνεξάγον ἅμα καὶ τὸ σύμφυτον θερμόν.

[2] "hard water", i.e, water resistent to concoction.

τινὰ τῆς γενέσεως αἴτιά ἐστιν· ἢ γὰρ ἀὴρ ἔπομβρος, ἢ πόλεμοι καὶ χύσεις αἱμάτων, ὃ σχεδὸν καὶ τῶν ἄλλων θηρίων τῆς γενέσεως αἴτιον. ἐξ οὗ ποτε καὶ περὶ Θετταλίαν πλῆθος ὄφεων ἱστοροῦσι γενέσθαι.

218A.3 ff. FHS&G (= Plinius, *NH* 31.13-4) Theophrastus Thuriis Crathim candorem facere, Sybarim nigritiam bubus ac pecori. quin et homines sentire differentiam eam; nam qui e Sybari bibant nigriores esse durioresque et crispo capillo, qui e Crathi candidos mollioresque et porrecta coma. item in Macedonia (&c.).

See also the following passage on the change of plants, in some cases due to feeding, in others to a spontaneous change of position:

HP II.2.9 μεταβάλλει δὲ καὶ τῇ τροφῇ καὶ διὰ τὴν ἄλλην ἐπιμέλειαν, οἷς καὶ τὸ ἄγριον ἐξημεροῦται καὶ αὐτῶν δὲ τῶν ἡμέρων ἔνια ἀπαγριοῦται, οἷον ῥόα καὶ ἀμυγδαλῆ. ... μεταβάλλει δ' οὖν τὰ μεταβάλλοντα τὸν τρόπον τοῦτον αὐτομάτως· ἐξαλλαγῇ δὲ χώρας, ὥσπερ ἐν Αἰγύπτῳ καὶ Κιλικίᾳ περὶ τῶν ῥοῶν εἴπομεν, οὐδὲ διὰ μίαν θεραπείαν.

The process affecting the nature of the organism is not necessarily external to it: see *CP* II.11.2, where the withering away of plants after bearing fruit excessively is said to be due to the fact that this bearing fruit detracts from the nature of the plant; this explains the situation in annuals, too: συνεξαυαίνονται γὰρ εὐθὺς αἱ ῥίζαι τελειουμένων τῶν καρπῶν *διὰ τὰς αὐτὰς ἀνάγκας*, ἐκδιδομένης πάσης τῆς φύσεως. The same is said to hold for animals: *ibid.* 11.4.

The idea of the nature of an organism being in conflict with internal or external conditions appears more clearly from Th.' somewhat more explicit remarks applying to plants and inanimate entities, 10 b 20-4: see commentary *ad loc.*

As to what kind of phenomena involved in the nutrition and generation of animals may be referred to by **συμπτώματα**, we will take the instances of the word found in Th.' writings as a starting-point.

On the question elicited by this passage, whether συμπτώματα should be conceived as a kind of necessity, too,[1] see our remarks on the interpretation of ἑτέρας, below.

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[1] The relationhip between Th.' use of ἀνάγκη and σύμπτωμα needs further investigation. The use of σύμπτωμα in Aristotle is not more transparent or uniform. σύμπτωμα is opposed to τὸ τινὸς ἕνεκα in Arist. *Resp.* 472 b 24-9 ἔτι δὲ τὸ τίνος ἕνεκα ταῦθ' ὑπάρχει τοῖς ζῴοις (λέγω δὲ τὸ ἀναπνεῖν καὶ τὸ ἐκπνεῖν) οὐθὲν εἰρήκασιν οἱ τοῦτον τὸν τρόπον λέγοντες, ἀλλ' ὡς περὶ συμπτώματός τινος ἀποφαίνονται μόνον. καίτοι γε κύρια ταῦθ' ὁρῶμεν τοῦ ζῆν καὶ τελευτᾶν· ὅταν γὰρ ἀναπνεῖν μὴ δύνωνται, τότε συμβαίνει γίνεσθαι τὴν φθορὰν τοῖς ἀναπνέουσιν. Still, if a process like respiration is for a particular purpose, the successive parts of the process happen ἐξ ἀνάγκης: Arist. *PA* 642 a 31 – b 2 δεικτέον δ' οὕτως, οἷον ὅτι ἔστι

The term primarily applies to the simultaneous occurrence of two phenomena; see the description in Th.' *De ventis* of etesian winds rising because of the melting of the snow in northern regions, under the influence of the sun (par. 11), and the reversing winds, a 'backlash' of the sea breeze, dying down because of the sun's heat, blowing against the land winds at the same time:

> *Vent.* 31 ὅτι δὲ συμβαίνει κατὰ τὴν ὥραν τοὺς ἐτησίας ἐπαίρεσθαι καὶ τὴν τροπαίαν πνεῖν περὶ Μακεδονίαν, ὥσπερ σύμπτωμα θετέον· πανταχοῦ γὰρ τῆς μεσημβρίας ἀπολήγει τὰ πνεύματα διὰ τὸν ἥλιον, ἅμα δὲ τῇ δείλῃ πάλιν αἴρεται. συμβαίνει δὲ κατὰ τὸν αὐτὸν καιρὸν τήν τε τροπαίαν πρὸς ταῖς ἀπογείαις αὔραις καὶ τοὺς ἐτεσίας ἐπαίρεσθαι πάλιν. ... τὰ μὲν οὖν συμπτώματα πειρατέον ἅπασι διαιρεῖν.

This passage suggests that the singular σύμπτωμα stands for the co-occurrence of two events, each accounted for by one and the same cause, without their being immediately connected themselves.[1] The last sentence suggests that phenomena of this type should be explained by analyzing the relevant σύμπτωμα in each case.

In *Vent.* 17 Th. notes that between the rising and the setting of the sun on the one hand and the rising and falling of winds on the other there is no invariable or predictable relation:[2]

> *Vent.* 17 συμβαίνει δ' οὖν ὁτὲ μὲν ἀνατέλλοντος τοῦ ἡλίου τὰ πνεύματα ἐπαίρεσθαι, ὁτὲ δὲ λήγειν. καὶ ἐπὶ τῆς δύσεως ὁμοίως· ὁτὲ μὲν γὰρ κατέπαυσεν, ὁτὲ δὲ ὥσπερ ἀφῆκεν. εἰ δέ ποτε καὶ κατὰ σύμπτωμα γίνοιτο ταῦτα, καθάπερ καὶ τὰ ἐπὶ τῶν ἄστρων ἀνατολαῖς καὶ δύσεσιν, ἐπισκεπτέον.

The question raised here seems to be whether, in spite of this apparent lack of regularity, particular instances of simultaneous occurrence can be found e.g. of the particular wind rising invariably when the sun is setting, which are to be explained by a common factor, as in the case of the stars: in *Vent.* 36 Th. maintains that the upper air, by being subject to occurrences such as the

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μὲν ἡ ἀναπνοὴ τουδὶ χάριν, τοῦτο δὲ γίγνεται διὰ τάδε ἐξ ἀνάγκης. ἡ δ' ἀνάγκη ὁτὲ μὲν σημαίνει ὅτι εἰ ἐκεῖνο ἔσται τὸ οὗ ἕνεκα, ταῦτα ἀνάγκη ἐστὶν ἔχειν, ὁτὲ δ' ὅτι ἔστιν οὕτως ἔχοντα καὶ πεφυκότα· τὸ θερμὸν γὰρ ἀναγκαῖον ἐξιέναι καὶ πάλιν εἰσιέναι ἀντικροῦον, τὸ δ' ἀέρα εἰσρεῖν· τοῦτο δ' ἤδη ἀναγκαῖόν ἐστιν. τοῦ ἐντὸς δὲ θερμοῦ ἀντικόπτοντος ἐν τῇ ψύξει τοῦ θύραθεν ἀέρος ἡ εἴσοδος καὶ ἡ ἔξοδος.

συμπτώματα are opposed to αἴτια in Arist. *Div.* 462 b 27, 463 a 2; that phenomena of this type are considered to be contrary to nature as well might be suggested by a phrase like τῶν παρὰ φύσιν συμπιπτόντων (*GA* 788 a 6 ff., see *ad* 10 b 19-20 *sub fin.*).

For discussion on the Aristotelian conception of necessity in nature see SORABJI (1980), esp. Chh. 9 and 10.

[1] Cp. WENSKUS (1990) 150: "nicht unmittelbar erkennbare Kausalverbindung". "Die Sternphasen und die Winde hängen beide von der Stellung der Sonne ab (...), aber die Sternphasen haben an sich keinen Einfluss auf die Winde."

[2] Apparently the moisture of the wind is also relevant: *Vent.* 15.

appearance and fading of stars, shows in advance what the wind will be like (πρότερον γὰρ ὁ ἀὴρ ὁ ἄνω τῷ πάσχειν ἀποδηλοῖ τὴν τῶν πνευμάτων φύσιν). An example of this is found in *Vent.* 55: when Orion rises and sets the winds are unstable—not because of some quality of the star itself, but because of the fact that both its rising and its setting coincide with a change of season (they occur at the beginning of the autumn and of the winter, respectively). During such transitions there is an instability (ἀοριστία) which affects the winds as well.

A similar use of the term is found in

CP VI.8.1 ἴδιον δ' ἐπὶ τῆς ἐλάας τὸ συμβαῖνον (εἴπερ ἀληθές)· λέγουσιν γὰρ ὡς οὐδὲν πλεῖον ἴσχει τοὔλαιον μετ' Ἀρκτοῦρον ἢ ὅσον λαμβάνει τοῦ θέρους, ἅμα δὲ καὶ ὁ πυρὴν (stone) τότε γίνεται σκληρός, μεθ' ὃν οὐκέτι δύνανται τὸ ὑγρὸν ἐξελαιοῦν· ὥστ' εἰ μὲν τῷ φυσικῷ δεῖ πάθει καὶ[1] συμπτώματι τὸν ὅρον λαμβάνειν, τῷ πυρῆνι ληπτέον, εἰ ⟨δὲ⟩ τῇ ὥρᾳ, τῇ τοῦ ἄστρου. τάχα ⟨δ'⟩ ἄμφω συμβαίνει διὰ τὴν αὐτὴν αἰτίαν, τοῦ μὲν οἷον πεττομένου, ⟨τοῦ δ' ἐλαιουμένου τῇ πλείονι θερμότητι. ...⟩

In this case σύμπτωμα approaches the modern notion of a 'symptom': the hardening of the stone is a concomitant circumstance of the maximum production of oil. This "natural affection (of the olive) and symptom (sc. of maximum oiliness)" may be used as an index to determine the time when the olive is no longer able to convert moist into oil. The other possibility is to watch the setting of Arcturus—which it seems could have been called a σύμπτωμα as well (though not a 'natural' one, insofar as it does not affect the nature of the olive itself). Th. makes an attempt to explain the connection between these phenomena in

CP VI.8.5 πρὸς Ἀρκτοῦρον μὲν οὖν ἄμφω ταὔτ' ἐστίν· καὶ γὰρ ἡ ὥρα θερμοτέρα καὶ ὁ χυλὸς ἀμιγέστερος. μετ' Ἀρκτοῦρον δ' ἐναντίως· αὔξεται γὰρ ἡ σὰρξ τότε καὶ τελεοῦται.

ὅτι δ' οὐκ ἐν πλήθει τροφῆς, οὐδ' ἐν εὐσαρκίᾳ τῶν ἐλαῶν τὸ τοῦ ἐλαίου πλῆθος, ἐκ πολλῶν φανερόν· αἵ τε γὰρ ἐπομβρίαι ποιοῦσιν ἔλαττον, αἵ τ' ἀρδόμεναι (that are watered) χεῖρον ῥέουσιν, ὧν δὲ ἡ σὰρξ πολλή, ὁ δὲ πυρὴν μικρός, ὀλιγοέλαιοι, καθάπερ αἱ φαύλιαι, ὡς ἐνταῦθα τῆς φύσεως κεκμηκυίας.[2] οὐδὲ δὴ ἐν τοῖς ψυχροῖς ἴσχουσιν, ἀλλὰ σάρκα πολλήν.

So there is after all a connection between these phenomena: the setting of Arcturus marks the end of the warm and dry weather which was favourable to the production of oil; the humidity which follows this period just adds to the flesh of the olive, without being converted into oil. The suggestion seems

[1] και U; καὶ N; καὶ τῶ aP; τῷ EINARSON/LINK.

[2] "which would come from the fact that the nature had spent so much of its force on the flesh that it was too exhausted to produce much stone or oil." tr. EINARSON/LINK.

to be that the stone likewise develops under the warm and dry weather and reaches its final hardness at the end of this period, too.

In *HP* Th. mentions plants whose flowering time follows the movements of the heavenly bodies:

> *HP* VII.15.1 ὅσα δὲ τὰς ἀνθήσεις λαμβάνουσι ἀκολουθοῦντα τοῖς ἄστροις, οἷον τὸ ἡλιοτρόπιον καλούμενον καὶ ὁ σκόλυμος, ἅμα γὰρ ταῖς τροπαῖς καὶ οὗτος, ἔτι δὲ τὸ χελιδόνιον, καὶ γὰρ τοῦτο ἅμα τῷ χελιδονίᾳ (swallow-wind) ἀνθεῖ, ταῦτα δὲ δόξειεν ἂν τῇ μὲν φυσικὴν ἔχειν τὴν αἰτίαν τῇ δὲ συμπτωματικήν.

Here again the idea seems to be that the simultaneous occurrence of the flowering and some heavenly or meteorological phenomenon is due partly, or 'in one respect', to the nature of the organism in question, partly to some external factor which affects the nature of the organism and is concurrent with the movements of the stars.[1]

A somewhat different and perhaps less technical use, implying human action, is found in

> *HP* V.4.6 φασὶ δὲ καὶ τὴν ἐλάτην φλοϊσθεῖσαν (barked) ὑπὸ τὴν βλάστησιν ἄσαπῆ διαμένειν ἐν τῷ ὕδατι· φανερὸν δὲ γενέσθαι ἐν Φενεῷ τῆς Ἀρκαδίας, ὅτε αὐτοῖς ἐλιμνώθη τὸ πεδίον φραχθέντος τοῦ βερέθρου· τότε γὰρ τὰς γεφύρας ποιοῦντες ἐλατίνας καί, ὅταν ἐπαναβαίνῃ τὸ ὕδωρ, ἄλλην καὶ ἄλλην ἐφιστάντες, ὡς ἐρράγη καὶ ἀπῆλθε, πάντα εὑρεθῆναι τὰ ξύλα ἀσαπῆ. τοῦτο μὲν οὖν ἐκ συμπτώματος.

So, the discovery that the wood had not decayed is apparently said to be ἐκ συμπτώματος as being due to the concurrence of the application of this particular kind of wood and the rising, and subsequent bursting out of the water. The unintentional character of the discovery is obvious: the type of wood was not selected with a view to being under the surface.[2]

In view of these passages it may be surmised that h.l. the phenomena connected with the nutrition and generation of animals are said to be not 'for the sake of' anything in the sense that the nature of these animals would be following an impulse towards the best; if they seem to follow the course of certain heavenly phenomena, this is because their nature is affected by circumstances (such as mild weather) concurrent with these movements—which explanation would contrast with Arist. *DA* 415 a 26 – b 2 φυσικώτατον γὰρ τῶν ἔργων τοῖς ζῶσιν ... τὸ ποιῆσαι ἕτερον οἷον αὐτό, ..., ἵνα τοῦ ἀεὶ καὶ

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[1] Cp. *HP* I.10.1, where certain trees are said to invert their leaves after the summer solstice, by which men know that the solstice is past.

[2] A similar kind of εὕρημα, though not described in therms of συμτώματα, is found in *Lap.* 52 (cp. also 59).

τοῦ θείου μετέχωσιν ᾗ δύνανται· πάντα γὰρ ἐκείνου ὀρέγεται κἀκείνου ἕνεκα πράττει ὅσα πράττει κατὰ φύσιν quoted above.

In contrast to *GA* 777 b 17 ff. (see above), where Aristotle maintains that the generation and gestation of animals are measured by the 'periods' of sun and moon, Th. seems to be arguing here that these processes do not occur because of some natural tendency towards regularity: the particular positions of the heavenly bodies and these processes are only concurrent phenomena, the nature of the animals being affected by the seasonal characteristics, which in their turn are connected with the cycles of the heavenly bodies.

> *CP* I.18.3 ἄτοπον δ' ἂν δόξειεν τὸ τῶν ὁμογενῶν ἔνια τὰ μὲν εἶναι πρώϊα τὰ δὲ ὄψια, καθάπερ συκαῖ τέ τινες καὶ ἄμπελοι καὶ μηλέαι καὶ ἄπιοι καὶ τἆλλα· τῶν γὰρ ζῴων οὐδὲν τοιοῦτον πλὴν κυνός, ἀλλὰ παρισόχρονα κατὰ τὰς κυήσεις καὶ τὰς ἐκτροφάς, ἀλλὰ μόνον *παραλλάττει ταῖς ὥραις* κατὰ τοὺς τόπους[1] καὶ μάλιστα τά γε ξυνανθρωπευόμενα.

Perhaps, however, we should not infer from the fact that the most explicit examples of the use of σύμπτωμα occur in a context concerned with heavenly phenomena, that the processes of nutrition and generation referred to here are limited to those allegedly connected with the cyclical movements of the stars in particular. On the contrary, Th.' point may rather be that such processes seem to be no more due to some natural tendency on the part of the animal than, for instance, supposed occasional instances of 'spontaneous mutations', for here too the nature of the animal is affected by a change in the meteorological conditions connected with a change of the seasons;

> *HP* II.4.4 ἄτοπον δ' ἂν δόξειε μᾶλλον εἰ ἐν τοῖς ζῴοις αἱ τοιαῦται μεταβολαὶ φυσικαὶ (due to the nature of the animal) καὶ πλείους· καὶ γὰρ κατὰ τὰς ὥρας ἔνια δοκεῖ μεταβάλλειν, ὥσπερ ὁ ἱέραξ καὶ ἔποψ καὶ ἄλλα τῶν ὁμοίων ὀρνέων. καὶ κατὰ τὰς τῶν τόπων ἀλλοιώσεις, ὥσπερ ὁ ὕδρος εἰς ἔχιν ξηραινομένων τῶν λιβάδων. (φανερώτατα δὲ καὶ κατὰ τὰς γενέσεις ἔνια, καὶ μεταβάλλει διὰ πλειόνων ζῴων· οἷον ἐκ κάμπης γίνεται χρυσαλλὶς εἶτ' ἐκ ταύτης ψυχή· καὶ ἐπ' ἄλλων δ' ἐστὶ τοῦτο πλειόνων, οὐδὲν ἴσως ἄτοπον, οὐδ' ὅμοιον τὸ ζητούμενον.)[2] ἀλλ' ἐκεῖνο συμβαίνει περὶ τὰ δένδρα καὶ ὅλως πᾶσαν τὴν ὕλην, ὥσπερ ἐλέχθη καὶ πρότερον, ὥστε αὐτομάτην μεταβλαστάνειν *μεταβολῆς τινος γινομένης* ἐκ τῶν οὐρανίων *τοιαύτης*.

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[1] τόπους U; τόκους Einarson/Link.

[2] "sans que l'objet de notre recherche soit du même ordre." tr. Amigues. Brackets added: Th. is mentioning in passing mutations unconnected with the seasons (for example, the development from caterpillar, *via* chrysalis, to butterfly), which are not strictly speaking at home in this context.

In fact the phenomenon of 'spontaneous generation' shows a divergent picture only insofar as there is no natural source (sperm, seed) to be developed in the first place:

> *CP* I.5.5 δεῖ δὲ ἀκριβέστερον ὑπὲρ αὐτοῦ (sc. the question of the failure to bear fruit in trees) σκέψασθαι καὶ ἀνιστορῆσαι τὰς αὐτομάτους γενέσεις. ὡς δὲ ἁπλῶς εἰπεῖν ἀναγκαῖον γίνεσθαι διαθερμαινομένης τῆς γῆς καὶ ἀλλοιουμένης τῆς ἀθροισθείσης μίξεως ὑπὸ τοῦ ἡλίου, καθάπερ ὁρῶμεν καὶ τὰς τῶν ζῴων.
>
> I.5.2 αἱ δ' ἐπομβρίαι καὶ σήψεις τινὰς ποιοῦσιν καὶ ἀλλοιώσεις, ἐπὶ πολὺ διικνουμένου τοῦ ὑγροῦ, καὶ τρέφειν καὶ ἐπαύξειν δύνανται τὰ συνιστάμενα (sc. the germs of plants), θερμαίνοντος τοῦ ἡλίου καὶ καταξηραίνοντος, ὥσπερ καὶ τὴν τῶν ζῴων γένεσιν οἱ πολλοὶ ποιοῦσιν.[1]

This situation appears to accord with the fact that elsewhere in our treatise, too, the boundary between regular occurrences and more occasional phenomena seems to be blurred: πλὴν εἰ συμβαίνει τῇ ἑτέρων τάξει καὶ μεταβολῇ *μορφάς τε παντοίας καὶ ποικιλίας* γίνεσθαι τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν 7 a 22 – b 2, and 5 b 23-6 συμβαίνει γὰρ *οἷον κατὰ συμβεβηκὸς* ὑπὸ τῆς κυκλικῆς περιφορᾶς καὶ εἰς τοὺς τόπους καὶ εἰς ἄλληλα τὰς μεταβολάς.

It seems that for Th. συμπτώματα could be considered as a form of necessity—in which case καὶ δι' **ἑτέρας** ἀνάγκας may be interpreted as "and due to other necessities" as well. σύμπτωμα, then, would seem to apply especially to those cases in which two concurrent phenomena are not immediately connected.

In any case both σύμπτωμα and the other forms of ἀνάγκη are 'external' in the sense that they depend on external influences. However on the surface the two kinds of causation seem to be rather different: συμπτωματικῶς is e.g. said of the rising of a star and fruit-bearing, where no connection can be seen; ἀνάγκῃ τινί is said, for instance, of the obvious phenomenon of the heat of the sun causing a sprouting of plants: see τῷ μὴ *δοκεῖν* ἔχειν οὕτως, ἀλλὰ ..., 10 a 25-6.

So viewed, there seems to be no discrepancy between the present passage and τὰ μὲν συμπτωματικῶς τὰ δ' ἀνάγκῃ τινί in the beginning of the chapter (10 a 26-7). Moreover, for the difference between δι' ἑτέρας ἀνάγκας and ἀνάγκῃ τινί it is relevant that in the earlier passage the suggestion of an *external* necessity seems to be less obvious where the heavenly bodies are concerned: see p. 491 *ad loc.*

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[1] See also 7 b 2-5, with pp. 318 ff. above.

10 b 19-20 ἔδει γὰρ ... ὡσαύτως.

τούτων MSS.; του USENER (1861) 278, cp. Isḥāq.

ἔδει **γάρ** κ.τ.λ. motivates the judgement that the phenomena referred to are 'for the sake of nothing' (10 b 18); τούτων χάριν limits this general statement to the likely candidate in case these phenomena had been for the sake of something. Assuming that (**εἴπερ**)[1] they were for the sake of these, they ought (**ἔδει**) always to have proceeded in the same way (**ἀεὶ κατὰ ταὐτά**)[2] and have been the same (**ὡσαύτως**, presumably referring to situations rather than processes): cp. *HP* I.2.7 πάλιν δὲ ἐκ τούτων σύνθετα τὰ μέγιστα καὶ πρῶτα ῥηθέντα καθαπερανεὶ μέλη, πλὴν οὐκ ἐκ τῶν αὐτῶν πάντα οὐδὲ ὡσαύτως ἀλλὰ διαφόρως.[3]

For ἔδει expressing an unfulfilled obligation[4] compare e.g.

> *CP* I.7.1 τὰ δὲ σπέρματα πάντων ἔχει τινὰ τροφὴν ἐν αὐτοῖς, ἣ συναποτίκτεται τῇ ἀρχῇ καθάπερ ἐν τοῖς ᾠοῖς· ᾗ[5] καὶ οὐ κακῶς 'Εμπεδοκλῆς εἴρηκεν φάσκων "ᾠοτοκεῖν μακρὰ δένδρεα", παραπλησία γὰρ τῶν σπερμάτων ἡ φύσις τοῖς ᾠοῖς. πλὴν ἔδει περὶ πάντων εἰπεῖν καὶ μὴ μόνον τῶν δένδρων·[6] ἅπαν γὰρ ἔχει τινὰ τροφὴν ἐν αὐτῷ, διὸ καὶ διαμένειν εἰς χρόνον, κ.τ.λ.
>
> II.3.5 καίτοι τὰ καθόλου καὶ κοινὰ πρῶτον ἔδει ζητεῖν·[7] εὑρεθέντων γὰρ τούτων, καὶ τὰ κατὰ μέρος φανερά.

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[1] Here again, indicating the condition under which the assertion in the main clause applies: see *ad* εἴπερ μὴ συμβάλλεται, 10 b 9, p. 501 above. *Contra* REPICI "[nourishments and generations of animals] are for the sake of no end, precisely because they are not always exactly the same and do not occur always in the same way, while they ought to (ἔδει) *since* (εἴ περ, once again) they are for the sake of animals. In this way, [Th.] is expressing a *true certainty*, and if so, Aristotle can hardly have been his polemical target." (1990) 211.

Again, the claim that this interpretation of εἴπερ has general application is ruled out by εἴπερ ἡ κυκλικὴ τοιαύτη, 5 b 23 and εἴπερ ἐφέσει τινὶ καὶ ὀρέξει, 6 a 9. Cp. e.g. Arist. *Cael.* 270 b 10 εἴπερ οὖν ἔστι τι θεῖον, ὥσπερ ἔστι, ...

[2] The phrase refers to the absence of movement and alteration which is said to be characteristic of the first principles and of τὰ νοητά in general in 4 a 6.

[3] "à ceci près que toutes ne sont pas faites des mêmes éléments ni disposées de la même manière; il y a divers arrangements." tr. AMIGUES.

Cp. also *Sud.* 22.

[4] "In den Indikativ des Imperfekts ... treten die Ausdrücke der unerfüllten Forderung χρῆν, ἔδει, ὤφελον [κ.τ.λ.], bei denen die Notwendigkeit, Pflicht, Möglichkeit u.s.w. als wirklich, als thatsächlich vorhanden hervorgehoben wird, während die als notwendig u.s.w. bezeichnete Handlung selbst nicht wirklich eingetreten ist." K-G II.1.204.

[5] ᾗ HP; η U; ἣ uN. Cp. *ad* 9 b 1.

[6] "He should however have spoken not just of trees, but of all plants" tr. EINARSON/LINK.

[7] "Yet one ought to have sought explanations first for matters of high generality and common to many different kinds" tr. EINARSON/LINK.

The point of view is that of the investigator who perceives a contradiction between the supposition of a final cause and observable facts.

Although according to L-M του is implied by the translations of Isḥāq, Tiphernas, and Stephanus,[1] in view of the preceding οὐθενὸς ... ἕνεκα this seems to be an obvious corruption and in any case too smooth to account for the alleged corruption of the Greek text. **τούτων**, then, is likely to refer to the nutrition and generation of animals (τὰς τροφὰς καὶ γενέσεις τῶν ζῴων 10 b 17-8),[2] while, here again (see preceding note on ταῦθ') the facts regarding these processes ((τὰ) περὶ τὰς τροφὰς καὶ γενέσεις, see p. 510 *ad loc.*) make up the subject.[3] In a biological context[4] χάριν with the genitive usually refers to a power, activity or process: cp. e.g.

> *CP* I.7.3 ὅσα δὲ ξυλώδη καὶ πυρηνώδη (kernel-like) περίκειταί τισι, φυλακῆς χάριν οἰητέον, ὥσπερ καὶ τὰ δερματικὰ καὶ ὑμενώδη· πάντα γὰρ ταῦτα πρὸς τὴν σωτηρίαν ἐστίν (ὑγρὰ γὰρ ἡ ἀρχὴ δυνάμει πάντων).
>
> I.16.1 ἴσως δ' αὐτὸ τοῦτο πρότερον εὖ ἔχει διελεῖν, ὅτι πέψις ἐστὶν ἡ μὲν οὖν τῶν περικαρπίων, ἡ δ' αὐτῶν τῶν καρπῶν, καὶ ἡ μὲν πρὸς τὰς ἡμετέρας τροφάς, ἡ δὲ πρὸς γέννησιν καὶ διαμονὴν τῶν δένδρων, οἱ γὰρ καρποὶ καὶ τὰ σπέρματα τούτων χάριν.
>
> See also *CP* 1.1.1 quoted above; *HP* I.2.4 (αἱ γὰρ δυνάμεις καὶ ὧν χάριν ἕκαστον ὕστερον ῥηθήσονται).

The drift of the argument seems to be similar to that expressed by πρὸς ἄλλοτ' ἄλλο 10 b 3 and 10 b 5 , and to the reasoning implied by διὰ τί τὰ κυκλικὰ μόνον ἐφετικά, τῶν δὲ περὶ τὸ μέσον οὐθὲν καίπερ κινητῶν ὄντων 5 b 11-3 (see commentary *ad locc.*).

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[1] *App. crit. ad loc.* It is also the conjecture of Usener (1861) 278 who interprets τούτων as 'for the sake of συμπτώματα and ἕτεραι ἀνάγκαι' and qualifies the sentence as "geradezu unsinnig". Cp. R-F *ad loc.*: "an unnecessary emendation".

[2] In fact, reference just could have been to the heavenly bodies with their regular course (to be inferred from συμπτώματα and esp. from δι' ἑτέρας ἀνάγκας: see commentary *ad loc.*); however, since the idea that nature follows the heavenly bodies *for the sake of* these bodies (or even for the sake of their regular course) is out of place in the present (historical as well as immediate) context, since even when the function of generation is said to be that the animals have a share in the divine, the idea is still that the good is on the part of the animal: see Arist. *DA* 415 a 22 ff., p. 511 above.

[3] *Contra* L-M *ad loc.*: "Le texte avec του est manifestement meilleur; avec τούτων, qui ne pourrait renvoyer qu'aux animaux (et non aux modes de nutrition et de génération, ce qui ne présenterait évidemment aucun sens), Théophraste limiterait sans raison la portée de son argument."

[4] Cp. *ad* 5 a 17; see also the following example with regard to inanimate nature: *Lap.* 60 φανερὸν δ' ἐκ τούτων ὅτι μιμεῖται τὴν φύσιν ἡ τέχνη, τὰ δ' ἴδια ποιεῖ, καὶ τούτων τὰ μὲν χρήσεως χάριν τὰ δὲ μόνον φαντασίας ὥσπερ τὰς ἀλοιφάς. ἔνια δὲ ἴσως ἀμφοῖν ὥσπερ χυτὸν ἄργυρον. ἔστι γάρ τις χρεία καὶ τούτου.

The generally recognized facts about the nutrition and generation of animals indicate that there is no inborn tendency towards the best: these processes are obviously influenced by various external factors. If these facts had been for the sake of generation and preservation, they ought to have been invariably the same—i.e., they would not have varied with external influences the way they do.

The argument seems to combine Aristotelian and Platonic conceptions (cp. *ad* 4 a 5-6). If Th. is begging the question here, he may not be to blame for it;[1] cp. Arist. *EE* 1247 a 31-3 ἀλλὰ μὴν ἥ γε φύσις αἰτία ἢ τοῦ ἀεὶ ὡσαύτως ἢ τοῦ ὡς ἐπὶ τὸ πολύ, ἡ δὲ τύχη τοὐναντίον; Ps.-Arist. *Probl.* 910 b 30-1 τὸ δὲ ἀεὶ καὶ ἐπὶ πάντων οὐκ ἀπὸ τύχης, ἀλλὰ φυσικόν. It seems that Th. is turning this argument upside down: there is too little order, too much complexity to justify an explanation which posits a development for the sake of this outcome.

As far as Th. is concerned the diversity to be observed in the phenomena and processes connected with the generation and survival of animals are beyond the limits within which explanation in terms of the best applies. These facts should be explained by a more complex pattern of causation in which the combination of matter having some δύναμις and factors such as environment and climate play a major role. This seems to imply a concept of φύσις in which there is room for diversity—a thing that Aristotle did not find so easy to incorporate:

> Arist. *GA* 778 a 4-9 βούλεται μὲν οὖν ἡ φύσις τοῖς τούτων (sc. sun and moon) ἀριθμοῖς ἀριθμεῖν τὰς γενέσεις καὶ τὰς τελευτάς, οὐκ ἀκριβοῖ δὲ διά τε τὴν τῆς ὕλης ἀοριστίαν καὶ διὰ τὸ γίγνεσθαι πολλὰς ἀρχὰς αἳ τὰς γενέσεις τὰς κατὰ φύσιν καὶ τὰς φθορὰς ἐμποδίζουσαι πολλάκις αἴτιαι τῶν παρὰ φύσιν συμπιπτόντων εἰσίν.
>
> *GC* 336 b 17-23 (...)· ὁρῶμεν γὰρ ὅτι προσιόντος μὲν τοῦ ἡλίου γένεσίς ἐστιν, ἀπιόντος δὲ φθίσις, καὶ ἐν ἴσῳ χρόνῳ ἑκάτερον· ἴσος γὰρ ὁ χρόνος τῆς φθορᾶς καὶ τῆς γενέσεως τῆς κατὰ φύσιν. ἀλλὰ συμβαίνει πολλάκις ἐν ἐλάττονι φθείρεσθαι διὰ τὴν πρὸς ἄλληλα σύγκρασιν· ἀνωμάλου γὰρ οὔσης τῆς ὕλης καὶ οὐ πανταχοῦ τῆς αὐτῆς ἀνάγκη καὶ τὰς γενέσεις ἀνωμάλους εἶναι καὶ τὰς μὲν θάττους τὰς δὲ βραδυτέρας, ...

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[1] Cp. Gotthelf's analysis of Aristotle's motives for sticking to a teleological interpretation of nature: "Given the simplicity of Aristotle's chemistry, he can only believe that the outcome of organic development is too complex, too orderly, possessing too much of limit, *logos*, and form, to be the result merely of the unlimited, relatively indefinite natural action and interaction of the elements. The development must be *for the sake of* its outcome—i.e., essentially and irreducibly a development *to* order—i.e., to form." (1976/77) 248-9.

10 b 20-6 ἔτι δ' ἐν τοῖς φυτοῖς ... τιμιωτέροις.

The next example (for **ἔτι δέ** see *ad* 10 b 7) for which one might ask the question 'for the sake of what' concerns the lower levels of being, vegetative and inorganic nature; the question applies particularly strongly to the latter.

These entities are characterized by their having, or seeming to have (**ὥσπερ δοκοῦσιν**),[1] a nature which is determinate in some way (**ὡρισμένην τιν' ἔχουσι φύσιν**) in respect of the shape, kind and the power or capacity[2] involved (**καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν**).

When a φύσις is called ὡρισμένη in these respects, one thing we can be certain of is that it is not mere matter, of which not much more can be said than that it *has* some δύναμις.[3] The present characterization, then, by itself suggests a contrast to unformed matter, but presumably also vicinity to it; this apparently is why there is even more reason (**μᾶλλον**) to ask the question τίνος ἕνεκα in the case of the inanimate entities.[4] Accordingly, the connotation of ὡρισμένη to the effect that these cases have a nature which is 'limited' seems to be relevant; having a φύσις which is ὡρισμένη seems to be the necessary condition for an entity to have some identity: compare

> *Sens.* 70 ἔτι δὲ εἴπερ μὴ ἔστι φύσις τῶν αἰσθητῶν διὰ τὸ μὴ ταὐτὰ πᾶσι φαίνεσθαι, δῆλον ὡς οὐδὲ τῶν ζῴων οὐδὲ τῶν ἄλλων σωμάτων· οὐδὲ γὰρ περὶ τούτων ὁμοδοξοῦσι. καίτοι εἰ μὴ καὶ διὰ τῶν αὐτῶν γίνεται πᾶσι τὸ γλυκὺ καὶ τὸ πικρόν, ἀλλ' ἥ γε φύσις τοῦ πικροῦ καὶ τοῦ γλυκέος ἡ αὐτὴ φαίνεται πᾶσιν. ὅπερ καὶ αὐτὸς (sc. Democritus) ἂν δόξειεν ἐπιμαρτυρεῖν· πῶς γὰρ ἂν τὸ ἡμῖν πικρὸν ἄλλοις ἦν γλυκὺ καὶ στρυφνόν, *εἰ μή τις ἦν ὡρισμένη φύσις αὐτῶν*;
>
> *HP* IV.13.4 ᾗ δ' ὥσπερ οὐσία καὶ φύσις τοῦ δένδρου μάλιστ' ἂν φαίνοιτο τὸ στέλεχος, ὅταν μεταλλάττῃ τοῦτο, κἂν τὸ ὅλον ἕτερον ὑπολάβοι τις, εἰ μὴ ἄρα διὰ τὸ ἀπὸ τῶν αὐτῶν ἀρχῶν εἶναι ταὐτὸ θείη· ...

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[1] The addition might reflect investigation, or at least a special interest on the part of the author. Alternatively, it may refer to an opinion prevalent in the Peripatos (cp. ποιοῦσιν, below). In that case, ὡρισμένην is probably meant to have a negative connotation ('merely limited'). See p. 527 below.

[2] See 8 a 14-20.

[3] See 8 a 18-9.

[4] Cp. Ps.-Arist. *Meteor.* IV, 389 b 28 ff. ἔστιν δ' ἅπαντα ὡς μὲν ἐξ ὕλης ἐκ τῶν εἰρημένων (sc. τῶν στοιχείων), ὡς δὲ κατ' οὐσίαν τῷ λόγῳ. ἀεὶ δὲ μᾶλλον δῆλον ἐπὶ τῶν ὑστέρων καὶ ὅλως ὅσα οἷον ὄργανα καὶ ἕνεκά του. οὕτω τοίνυν καὶ χεὶρ τελευτήσαντος ὁμωνύμως, ... (390 a 2) ἧττον δ' ἐπὶ σαρκὸς καὶ ὀστοῦ τὰ τοιαῦτα δῆλα. ἔτι δ' ἐπὶ πυρὸς καὶ ὕδατος γῆς ἧττον· *τὸ γὰρ οὗ ἕνεκα ἥκιστα ἐνταῦθα δῆλον ὅπου δὴ πλεῖστον τῆς ὕλης*· ὥσπερ γὰρ εἰ τὰ ἔσχατα ληφθείη, ἡ μὲν ὕλη οὐθὲν ἄλλο παρ' αὐτήν, ἡ δ' οὐσία οὐθὲν ἄλλο ἢ ὁ λόγος, τὰ δὲ μεταξὺ ἀνάλογον τῷ ἐγγὺς εἶναι ἕκαστον, ἐπεὶ καὶ τούτων ὁτιοῦν ἐστὶν ἕνεκά του, καὶ οὐ πάντως ἔχον ὕδωρ ἢ πῦρ, ὥσπερ οὐδὲ σὰρξ οὐδὲ σπλάγχνον. ... (390 b 16) *ὁμοίως δὲ καὶ τὰ ἐν τοῖς φυτοῖς καὶ τὰ ἄψυχα*, οἷον χαλκὸς καὶ ἄργυρος· πάντα γὰρ δυνάμει τινί ἐστιν ἢ τοῦ ποιεῖν ἢ τοῦ πάσχειν, ὥσπερ καὶ σὰρξ καὶ νεῦρον· ἀλλ' οἱ λόγοι αὐτῶν οὐκ ἀκριβεῖς.

An analogous situation applies to inanimate entities; see

Lap. 50 εἴη δ' ἂν λαμβάνειν καὶ ταύτας τὰς διαφορὰς ὅσαι πρὸς τὴν ἀπολίθωσιν εὐφυεῖς· ἐπεὶ αἵ γε τοὺς τούτων ποιοῦσαι χυμοὺς διαφόρους ἀλλήλων ⟨ἰδίαν⟩ τιν' ἔχουσι φύσιν, ὥσπερ καὶ αἱ τοὺς τῶν φυτῶν ...

68 (about gypsum) ἡ μὲν δύναμις ἐν τούτοις καὶ τοῖς τοιούτοις. ἡ δὲ φύσις ἔοικεν ἀμφότερά πως ἔχειν καὶ τὰ τῆς κονίας (lime) καὶ τὰ τῆς γῆς, θερμότητα καὶ γλισχρότητα, μᾶλλον δὲ ἑκατέρας ὑπερεχούσας. θερμοτέρα γὰρ τῆς κονίας, γλισχροτέρα δὲ πολὺ τῆς γῆς. (Cp. also 65: ἡ δὲ φύσις αὐτῶν ἰδία· λιθωδεστέρα γὰρ μᾶλλόν ἐστιν ἢ γεώδης.)

The series μορφαῖς, εἴδεσιν, δυνάμεσιν proceeds from determinateness in outward appearance to the most 'basic' kind of determinateness inherent in the matter of the entity in question. Determinateness in shape, i.e. outward appearance (μορφαῖς) for plants depends upon the interrelation between their "outward parts":

HP I.1.4 ἡ δὲ ἱστορία τῶν φυτῶν ἐστιν ὡς ἁπλῶς εἰπεῖν ἢ κατὰ τὰ ἔξω μόρια καὶ τὴν ὅλην μορφὴν ἢ κατὰ τὰ ἐντός, ὥσπερ ἐπὶ τῶν ζῴων τὰ ἐκ τῶν ἀνατομῶν.

IV.8.5 διαφέρουσι δὲ καὶ τοῖς φύλλοις καὶ τοῖς στελέχεσι καὶ τοῖς ξύλοις καὶ τῇ ὅλῃ μορφῇ.

V.3.7 τὸ δὲ θύον (thyine wood)... παρ' Ἄμμωνί τε γίνεται καὶ ἐν τῇ Κυρηναίᾳ, τὴν μὲν μορφὴν ὅμοιον κυπαρίττῳ καὶ τοῖς κλάδοις καὶ τοῖς φύλλοις καὶ τῷ στελέχει καὶ τῷ καρπῷ, ...

More particularly, the shape of a plant is determined not only by the presence or absence of parts, but also by their quality and size, as well as by their arrangement: see

HP I.1.6 ff. αἱ δὲ τῶν μερῶν διαφοραὶ σχεδὸν ὡς τύπῳ λαβεῖν εἰσιν ἐν τρίσιν, ἢ τῷ τὰ μὲν ἔχειν τὰ δὲ μή, καθάπερ φύλλα καὶ καρπόν, ἢ τῷ μὴ ὅμοια μηδὲ ἴσα, ἢ τρίτον τῷ μὴ ὁμοίως.

τούτων δὲ ἡ μὲν ἀνομοιότης ὁρίζεται σχήματι χρώματι πυκνότητι μανότητι τραχύτητι λειότητι καὶ τοῖς ἄλλοις πάθεσιν, ἔτι δὲ ὅσαι διαφοραὶ τῶν χυλῶν. ἡ δὲ ἀνισότης ὑπεροχῇ καὶ ἐλλείψει κατὰ πλῆθος ἢ μέγεθος. ... (7) τὸ δὲ μὴ ὁμοίως τῇ θέσει διαφέρει· λέγω δ' οἷον τὸ τοὺς καρποὺς τὰ μὲν ἐπάνω τὰ δ' ὑποκάτω τῶν φύλλων ἔχειν ... (8) διαφέρει δὲ ἔνια καὶ τῇ τάξει· ...

ὥστε τὰς μὲν διαφορὰς ἐκ τούτων ληπτέον ἐξ ὧν καὶ ἡ ὅλη μορφὴ συνδηλοῦται καθ' ἕκαστον.

In the case of inanimate nature such as stones, whose parts are of the uniform kind even more predominantly, and in which the distinction between the 'outward' and 'inner' parts seems to be effaced, the appearance of the entity as such (its size, colour, &c.) seems to be at issue rather; see e.g. *Lap.* 26 καὶ

ἔνιοί γε δὴ καὶ ὑπολαμβάνουσι τὴν αὐτὴν φύσιν εἶναι· καὶ γὰρ τὴν χρόαν παρόμοιαι τυγχάνουσιν.

The determinateness of the nature, or identity, of vegetative and inorganic nature which regards their 'kind' (εἴδεσιν) probably concerns more fundamental distinctions shared by enitities on the basis of which they may be regarded as being 'the same'[1] at different levels of generality: e.g. tree/shrub/under-shrub/herb (*HP* I.3.1); stone/other kinds of earth (*Lap.* 1), or their sub-divisions (*HP* I.14.3: πάντων δὲ τῶν δένδρων ὡς ἁπλῶς εἰπεῖν καὶ τῶν φυτῶν εἴδη πλείω τυγχάνει καθ' ἕκαστον γένος) as aquatic/terrestrial (*HP* IV.6.1 μεγίστην δὲ διαφορὰν αὐτῆς τῆς φύσεως τῶν δένδρων καὶ ἁπλῶς τῶν ὑλημάτων ὑποληπτέον ἣν καὶ πρότερον εἴπομεν, ὅτι τὰ μὲν ἔγγαια τὰ δ' ἔνυδρα τυγχάνει), wild/cultivated, male/female, flowering/flowerless, evergreen/ deciduous (see e.g. *HP* I.14.3), hard/soft, compact/porous (*Lap.* 6, 11).

As we have seen, the 'nature' of an entity is ultimately based on a special mix of δυνάμεις (or material elements);[2] see e.g.

> *HP* I.2.1 ἄλλα δὲ ἐξ ὧν ταῦτα (sc. τὰ μέγιστα μέρη of plants, such as root or trunk) φλοιὸς ξύλον μήτρα, ὅσα ἔχει μήτραν. πάντα δ' ὁμοιομερῆ. καὶ τὰ τούτων δὲ ἔτι πρότερα καὶ ἐξ ὧν ταῦτα, ὑγρὸν ἲς φλὲξ σάρξ· ἀρχαὶ γὰρ αὗται· πλὴν εἴ τις λέγοι *τὰς τῶν στοιχείων δυνάμεις*·[3] αὗται δὲ κοιναὶ πάντων. ἡ μὲν οὖν οὐσία καὶ ἡ ὅλη φύσις ἐν τούτοις.
>
> I.12.2 ὡς δ' ἁπλῶς εἰπεῖν ἅπασαι (all saps) κατὰ τὴν ἰδίαν φύσιν ἑκάστου δένδρου καὶ ὡς καθ' ὅλου εἰπεῖν φυτοῦ· πᾶν (each plant) γὰρ ἔχει κρᾶσίν τινα καὶ μίξιν ἰδίαν, ἥπερ οἰκεία δῆλον ὅτι τυγχάνει τοῖς ὑποκειμένοις καρποῖς· ...

At the level of the entity a capacity (whether active or passive) may be ascribed to the whole as well as to a part:[4] for instance, of root, stem, and other parts of plants: *HP* I.6.9 δυνάμει γὰρ δεῖ φυσικῇ ("natural capacity") διαιρεῖν καὶ οὐ τόπῳ (sc. of the root); of flavours and scents: ταῖς δυνάμεσι τῶν χυλῶν καὶ τῶν ὀσμῶν *HP* IV.16.6; of wood, being by nature either παθητικόν or ποιητικόν, *HP* V.9.7; also with regard to stones, *Lap.* 4: τοῖς δὲ

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[1] Cp. VIII.2, 8 b 20 ff.

[2] Cp. *HP* IV.3.7 τὴν φύσιν αὐτῶν (of particular trees) ξηρὰν οὖσαν καὶ ἐκ τοιούτων συνεστηκυῖαν; V.3.4 φύσει ... ὑγρότερον; *CP* I.17.8 ψυχρὰ τῇ φύσει.

[3] "unless one should advance <as ἀρχαί> the powers of the elements rather"; see *ad* 4 b 6-8, p. 118 n. 4.

[4] The question how the transition of the δυνάμεις as material constituents or elementary powers to the δύναμις of an entity or part of an entity should be conceived is, of course, a crucial one. Cp., perhaps, the question ἐν τίσιν τὰ ὄντα at the end of the treatise (12 a 1-2). In any case it seems that according to Th. there is an immediate connection between the material potential of an entity and its capacity in the sphere of acting and being acted upon.

λίθοις αἵ τ' αὐταὶ (differences, sc. *qua* such qualities as colour, solidity) καὶ πρὸς ταῖς τοιαύταις αἱ κατὰ τὰς δυνάμεις τοῦ τε ποιεῖν ἢ πάσχειν καὶ τοῦ μὴ πάσχειν; *ibid.* 41 ἔνιαι δὲ λίθοι καὶ τὰς τοιαύτας ἔχουσι δυνάμεις εἰς τὸ μὴ πάσχειν, ... οἷον τὸ μὴ γλύφεσθαι ("be carved") σιδηρίοις ἀλλὰ λίθοις ἑτέροις. See also the pairs of δύναμις ἀδυναμία listed in Ps.-Arist. *Meteor.* IV 385 a 12 ff. (πηκτὸν ἄπηκτον. τηκτὸν ἄτηκτον. μαλακτὸν ἀμάλακτον. κ.τ.λ.).

With regard to these entities (**ταῦτα**) with their determinate nature,[1] one might ask the question 'for the sake of what' (**τίνος ἕνεκα**). The rhetoric of the passage brings out that the determinateness of their nature is somehow important (καὶ μᾶλλον τοῖς ἀψύχοις, also καὶ ταῦτ(α), 10 b 25).

The drift of the reasoning is apparently meant to be explained in the next sentence (αὐτὸ **γὰρ** τοῦτο ἄπορον, ὅτι ...), which unfortunately is not perfectly clear itself: see esp. *ad* (μὴ) ποιοῦσιν, below.

Whatever the precise interpretation of the sequel, **αὐτὸ ... τοῦτο** presents as a more basic problem the possibility that these things have no explanation at all, thus paving the way for an explanation not in terms of finality or function but of a more physical nature (see ᾗ καὶ ἔοικεν κ.τ.λ. 10 b 26 – 11 a 1); for **ἄπορον** see *ad* 5 a 23. The possibility that there is no explanation is even more problematic for a reason introduced by **καὶ ταῦτ'** ("especially (when)"),[2] compare e.g.

> *CP* I.11.3 ἡ δὲ μηλέα καὶ ὅσα ἄλλα τοιαῦτα τελεογονεῖ καὶ ἐκπέττει, διὸ τὸ μερίζεσθαι ⟨καὶ⟩ ἄλλοτ' ἄλλο βλαστάνειν ἄτοπον, καὶ ταῦτ' ἀπὸ μιᾶς ὁρμῆς.

Apparently this holds especially when for other things than plants and inanimate things (**ἐν ἑτέροις**), which are prior and more honorable (**προτέροις**

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[1] In view of 10 b 27 where it is said that 'ταῦτα' acquire certain forms or differences to one another it seems unlikely that here reference would be to μορφαὶ καὶ εἴδη καὶ δυνάμεις themselves, as L-M have it.

[2] L-M leave out the semi-colon after λόγον: "il est plus satisfaisant de rapporter le pronom ταῦτα, comme en b24 (et b27), au domaine des plantes et des inanimés, ou plus exactement à leurs propriétés (...), et d'en faire le sujet de ἔχειν. Le renforcement par l'adverbe καί ("eux aussi') se comprend bien, puisqu'il s'agit pour Théophraste de montrer que la règle qui vaut pour les phénomènes "météorologiques" ou terrestres et la vie animale vaut *aussi* pour les êtres inférieurs (et tout particulièrement dans le cas des minéraux, cf. μᾶλλον, 10b21)." (*ad loc.*). Apart from the fact that it is doubtful whether the Greek allows of this interpretation, αὐτὸ ... τοῦτο may seem to be rather too heavy if the point is only that "si l'on n'admet pas ... que les propriétés des êtres supérieurs soient dépourvues d'explication (...), il n'y a aucune raison non plus de l'admettre quand il s'agit d'êtres inférieurs (καὶ ταῦτα)." (*ibid.*). I suspect that an argument like this would have been expressed by καὶ γὰρ ἐν αὐτοῖς τούτοις ἄπορον τὸ μὴ ἔχειν λόγον (or the like).

καὶ τιμιωτέροις), <it is not like this>. For the idea that prior entities are of a higher value, see *ad* σεμνοτέραν (4 a 8) pp. 83-4 above.

Considering that the absence of an explanation might seem to be less serious in the case of entities lower down in the hierarchy of being, it seems that the clue to this passage must be found in the determinateness to be observed in the nature of vegetative and inanimate entities: for these the explanation may expected to be less complicated than for the entities prior to these. It would be strange, then, if plants and inanimate things, being determinate, have no explanation, especially if this is not supposed to be so in entities which are prior to them but in which there is more complexity to be accounted for.

This reasoning calls to mind the statement in Ch. IV that order and being definite most properly belong to the most valuable things (τοῖς ... τιμιωτάτοις οἰκειότατον ἡ τάξις καὶ τὸ ὡρίσθαι, 6 b 27-8). In order to make sense, it seems that ἑτέροις[1] should refer to what is on the one hand prior and more valuable, and on the other hand less determinate than plants and inanimate things. This rules out that the reference is either to the objects of thought which are prior and more highly valued but more determinate,[2] or to the heavenly bodies, to which the same applies to a lesser degree.[3] Although attractive as an interpretation because an even less complex level of reality is involved, it is not likely that the reference is to the elementary principles, since, while being prior and more valuable (as principles), they are less determinate (viz., ὡρισμένα only in δυνάμεις), too. More importantly in the case of the basic principles, which constitute the limits of being and thus of explanation, the absence of an explanation is not disturbing, or not disturbing in the same sense: cp. 9 b 1-5.

Animals, then, which are also prior and (as being endowed with more capacities of soul) more valuable[4] seem to be the most likely candidates, insofar as their nature might be considered to be more differentiated and less limited, which is a way of saying that they show more variety. One might compare Th.' comments on the difference of nature of animals and plants in *CP*, where mutations of plants are compared with the more rigorous mutations occurring in the case of animals:

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[1] R-F xxviii: "in the *heavenly* region" (so Tricot); "the animals, and especially, the heavens" Reale/Catan; "les phénomènes météorologiques ou terrestres et la vie animale" L-M (see above); "presumably, animals" Sharples (1989).

[2] See 4 a 6-9.

[3] See 4 a 15-7, 11 b 17-21.

[4] Cp. 584A.114-6 FHS&G ψυχὴ δὲ πολλῷ τιμιώτερον τῶν ἐκ γῆς φυομένων, ἣν ἀφαιρεῖσθαι θύοντα τὰ ζῷα οὐ προσῆκεν.

CP II.16.6 f. εἰ δὲ καὶ ἐπὶ τῶν ζῴων τοῦτο συμβαίνει, καθάπερ φασὶν ἐπὶ τῶν ὀρνίθων καὶ χρώμασι καὶ σχήμασι καὶ δυνάμεσι, καὶ τοῦτο καθ' ἕκαστον ἐνιαυτόν, οὐκ ἐν πλήθει χρόνου πλείονι, κἂν θαυμάσειεν ἄν τις μᾶλλον εἰ μή τι συμβαίνει καὶ ἐνταῦθα (sc. in the case of plants) τοιοῦτον, ἀτακτοτέραν ⟨γὰρ⟩ καὶ μᾶλλον ξυγκεχυμένην εἰκὸς ταύτην εἶναι τὴν φύσιν· *τάχα δ' ἰσχυροτέραν*, διὸ καὶ μεταβάλλειν οὔτε χρώμασιν οὔτε ἐν τοῖς ἄλλοις φθειρομένην, καὶ τοῦτο ἐν ὀλίγοις ὥστε εἰς ἄλλο γε μεταλλάττεσθαι φυτόν. (7) (οὔτε γὰρ κατὰ τὴν γένεσιν οὐδὲν μεταβάλλει τὰς μορφάς, ὡς ἔνια τῶν ζῴων, ἀλλ' ἁπλῆ τις ἡ φύσις πάντων.)

In *CP* Th. is using the supposition that the nature of plants may be "stronger" than that of animals to explain the observation that plants are less prone to be deprived of their nature, whereby he seems to be saying that plants have a comparatively inalienable identity.[1] The nature of plants is comparatively strong, in the sense of being comparatively resistant to attacks, which is in a way the counterpart to its being less orderly and more "confused", apparently insofar as involving a lower stage of complexity[2] or a lesser degree of differentiation[3] (hence ξυγκεχυμένην?). Einarson/Link (*ad loc.*) refer to

Arist. *PA* 655 b 37 – 656 a 6 ἡ μὲν οὖν τῶν φυτῶν φύσις οὖσα μόνιμος οὐ πολυειδής ἐστι τῶν ἀνομοιομερῶν· πρὸς γὰρ ὀλίγας πράξεις[4] ὀλίγων ὀργάνων ἡ χρῆσις· διὸ θεωρητέον καθ' αὑτὰ περὶ τῆς ἰδέας αὐτῶν. τὰ δὲ πρὸς τῷ ζῆν αἴσθησιν ἔχοντα πολυμορφοτέραν ἔχει τὴν ἰδέαν, καὶ τούτων ἕτερα πρὸ ἑτέρων μᾶλλον, καὶ πολυχουστέραν, ὅσων μὴ μόνον τοῦ ζῆν ἀλλὰ καὶ τοῦ εὖ ζῆν ἡ φύσιν μετείληφεν.

In the case of plants the comparative stability of their nature is somehow connected with the fact that the uniform and less complex parts predominate (i.e., applying the analogy with animals: their parts are more frequently of the type of 'flesh' and 'bone', less frequently of the type 'eye' or 'hand'). Compare, for instance, Th.' observation that sprouting from other parts than the proper ones is less unreasonable than in the case of animals:

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[1] In *HP* I.3.2 ff. Th. is drawing attention to the fact that plants may depart from their nature, such as wild plants being cultivated (τὰ δὲ καὶ παρὰ τὴν ἀγωγὴν ἀλλοιότερα γίνεσθαι καὶ ἐκβαίνειν τῆς φύσεως); the same holds for animals, too, according to Arist. *HA* 589 b 29-31 τούτων δὲ πάντων (sc. of aquatic animals) ἔοικεν ἡ φύσις ὡσπερανεὶ διεστράφθαι, καθάπερ τῶν τε ἀρρένων ἔνια γίνεται θηλυκὰ καὶ τῶν θηλέων ἀρρενωπά. In this case the συμμετρία between the nature of the organism and the quality of the environment turns towards the latter. Elswhere Th. goes to some length to argue that external influences, even when produced under cultivation, may be called 'natural', too. See below.

[2] Cp. ἁπλῆ τις ἡ φύσις *CP* II.16.7 above.

[3] For this connotation of ὡρισμένη see above.

[4] It may be noted that Th. in *HP* I.1.1 takes a more radical position: ἤθη γὰρ καὶ πράξεις οὐκ ἔχουσιν (sc. τὰ φυτά) ὥσπερ τὰ ζῷα. See Introduction p. 32 n. 5.

CP V.2.1 ἡ δὲ σύστασις (i.e. the formation of an ἀρχή productive of fruit) οὐκ ἄλογος, εἰ τοιαύτην τινὰ κατὰ μόριον ἔλαβε κρᾶσιν, ἀλλ' εὐλογωτέρα πολὺ τῆς ἐν ζῴοις γινομένης, οἷον εἰ κέρας ἐκ τοῦ στήθους ἤ τι τοιοῦτον ἕτερον· αὕτη γὰρ μείζων ἡ παραλλαγὴ τῶν ἐν τοῖς φυτοῖς ὅσῳ μᾶλλον ὁμοιομερῆ τὰ φυτὰ τῶν ζῴων.[1]

Cp. also Aristotle's remarks on the difference between plants and insects, to the effect that the first are able to preserve their nature when divided, whereas the latter are not; Aristotle argues that this does not likewise apply to "animals of superior construction", which apparently require some special kind of integration of their differentiated parts to achieve a degree of unity approaching that of plants with their more homogeneous nature:

Arist. *Juv.* 468 b 1-15 ἀλλ' ὁμοίως ἔχει κατά γε τοῦτο τά τε φυτὰ καὶ τὸ τῶν ἐντόμων γένος. ἀνάγκη δὲ καὶ τὴν θρεπτικὴν ψυχὴν ἐνεργείᾳ μὲν ἐν τοῖς ἔχουσιν εἶναι μίαν, δυνάμει δὲ πλείους. ὁμοίως δὲ καὶ τὴν αἰσθητικὴν ἀρχήν· φαίνεται γὰρ ἔχοντα αἴσθησιν τὰ διαιρούμενα αὐτῶν. ἀλλὰ πρὸς τὸ σώζεσθαι τὴν φύσιν, τὰ μὲν φυτὰ δύναται, ταῦτα δ' οὐ δύναται διὰ τὸ μὴ ἔχειν ὄργανα πρὸς σωτηρίαν, ἐνδεᾶ τ' εἶναι τὰ μὲν τοῦ ληψομένου τὰ δὲ τοῦ δεξομένου τὴν τροφήν, τὰ δ' ἄλλων τε καὶ τούτων ἀμφοτέρων. ἐοικάσι γὰρ τὰ τοιαῦτα τῶν ζῴων πολλοῖς συμπεφυκόσιν· τὰ δ' ἄριστα συνεστηκότα τοῦτ' οὐ πάσχει τῶν ζῴων *διὰ τὸ εἶναι τὴν φύσιν αὐτῶν ὡς ἐνδέχεται μάλιστα μίαν*. διὸ καὶ μικρὰν αἴσθησιν ἔνια ποιεῖ διαιρούμενα τῶν μορίων, ὅτι ἔχει τι ψυχικὸν πάθος· χωριζομένων γὰρ τῶν σπλάγχνων ποεῖται κίνησιν, οἷον καὶ αἱ χελῶναι (tortoises) τῆς καρδίας ἀφῃρημένης.

The possibility that plants and inanimate things, with their comparatively simple and less differentiated nature, have no explanation is more curious when an explanation *is* given in the case of animals, which are more complex and various (and thus, the idea seems to be, harder to explain).

Taking one's clue from the rhetoric of the passage, then, and especially taking into account the climax involved in καὶ ταῦτ(α), the usual interpretation of **μὴ ποιοῦσιν** as "for those who do not suppose <this to be the case>" (cp. R-F) is quite likely.[2] If one does not in the case of animals with their more

[1] "And so a fruit is closer to a piece of trunk than a horn is to an animal's chest", EINARSON/LINK *ad loc.* In fact their commentary to the preceding ἀρχῆς γὰρ ἐπιστάσης, ἡ ἐπιρροὴ τῆς τροφῆς ἐξομοιοῦται τῷ ὑποκειμένῳ, καθάπερ ἐν τοῖς ἄλλοις, to the effect that "The nature and power are teleological, and have a goal ... Otherwise the starting-point would produce not fruit, but just more trunk", which is questionable as such, seems to be precisely the view challenged by our passage.

[2] See also L-M *ad loc.*

USENER (1861) 278 supposes that the argument is similar to that in 7 a 10 ff. (ἄλογον δὲ κἀκείνοις δόξειεν ἄν, εἰ ὁ μὲν ὅλος οὐρανὸς καὶ ἕκαστα τῶν μερῶν ἅπαντ' ἐν τάξει καὶ

complex and varied nature suppose that there is no explanation, this supposition is even more unlikely in the case of the less complicated plants and inanimate things. The paradox presupposes a Peripatetic orientation.

For the dative case without the article referring to the investigator implied by the present argument, compare

Arist. *Met.* 1029 a 26-33 ἐκ μὲν οὖν τούτων *θεωροῦσι* συμβαίνει οὐσίαν εἶναι τὴν ὕλην· ἀδύνατον δέ· καὶ γὰρ τὸ χωριστὸν καὶ τὸ τόδε τι ὑπάρχειν δοκεῖ μάλιστα τῇ οὐσίᾳ, διὸ τὸ εἶδος καὶ τὸ ἐξ ἀμφοῖν οὐσία δόξειεν ἂν εἶναι μᾶλλον τῆς ὕλης. τὴν μὲν τοίνυν ἐξ ἀμφοῖν οὐσίαν, λέγω δὲ τὴν ἐκ τῆς ὕλης καὶ τῆς μορφῆς, ἀφετέον, ὑστέρα γὰρ καὶ δήλη· φανερὰ δέ πως καὶ ἡ ὕλη· περὶ δὲ τῆς τρίτης σκεπτέον, αὕτη γὰρ ἀπορωτάτη.

CP II.17.8 (17.7 ταῦτα μὲν οὖν οὐ λύει τὴν ἀπορίαν, ἀλλ' ἐπιξυνδεῖ μᾶλλον.) ἡ δ' ἀρχὴ ληπτέα φυσικῶς, *ἀκολουθοῦσι* κατὰ τὸ γιγνόμενον, ὅτι πέφυκεν ἐν ἑτέρῳ μόνον ταῦτα γίνεσθαι, καθάπερ καὶ ζῷα ἐν ζῴοις, οἷον τά τε ἐν ταῖς πίνναις ἢ καὶ ὅσα ἄλλα ζῳοτροφεῖ. πλὴν τῶν μὲν οὐκ ἔχομεν τὴν γένεσιν, τῶν δ' ἔχομεν λέγειν.

The somewhat confusing sequence of dative cases is caused by the focal position of ἐν ἑτέροις immediately after καὶ ταῦτ(α). The negation μή prevents the participle being connected with ἑτέροις, since this would yield "in other things when inactive",[1] which in the present context does not make sense.

For the verb compare

CP I.5.2 αἱ δ' ἐπομβρίαι καὶ σήψεις τινὰς ποιοῦσιν καὶ ἀλλοιώσεις, ἐπὶ πολὺ διικνουμένου τοῦ ὑγροῦ, καὶ τρέφειν καὶ ἐπαύξειν δύνανται τὰ συνιστάμενα, θερμαίνοντος τοῦ ἡλίου καὶ καταξηραίνοντος, ὥσπερ καὶ τὴν τῶν ζῴων γένεσιν οἱ πολλοὶ ποιοῦσιν.

278.28 f. FHS&G (= Prisc. *Metaphr.* 1.23) (...) διατείνων καὶ ἐπὶ τοὺς μὴ διαφανοῦς ποιοῦντας τὸ ὁρᾶν ἀλλ' ἀπ' αὐτῶν ἐπιφερομένων τῶν χρωμάτων ...

10 b 26 – 11 a 1 ἢ καὶ ἔοικεν ... διαφοράς.

For **ἢ καί** ... see *ad* 9 b 1. In view of what precedes there seems to be some plausibility (**ἔοικεν ... ἔχειν τι πιστόν**) in the following account or reasoning (**ὁ λόγος**)[2]—but of course the aspect of 'explanation' in τὸ μὴ ἔχειν λόγον

λόγῳ, καὶ μορφαῖς καὶ δυνάμεσιν καὶ περιόδοις, ἐν δὲ ταῖς ἀρχαῖς μηθὲν τοιοῦτον κ.τ.λ.) and conjectures καὶ ταῦτ' ἐν ἑτέροις μὴ πεφυκότα οὖσι προτέροις καὶ τιμιωτέροις,[1] rejecting a previous idea of reading ποιούσης instead of ποιοῦσι: "aber τῆς φύσεως würde nicht entbehrt werden können" (*l.c.*). In his edition (1890) USENER reads προσοῦσαν "scil. ὡρισμένην φύσιν" (*ad loc.*).

[1] See *ad* 5 a 8-10.

[2] See *ad* 5 a 6.

(24-5) is here relevant, too. There is reason, then, to believe that it is by spontaneity and by the rotation of the universe that natural entities (**ταῦτα**: plants and inanimate things, but probably including animals, too) acquire certain forms and mutual differences. There is, of course, a wide variety of reasons why one might hold something to be credible:

Arist. *Rhet.* 1376 b 32 – 1377 a 7 αἱ δὲ βάσανοι (examination by torture) μαρτυρίαι τινές εἰσιν, ἔχειν δὲ δοκοῦσι τὸ πιστόν, ὅτι ἀνάγκη τις πρόσεστιν. οὔκουν χαλεπὸν οὐδὲ περὶ τούτων εἰπεῖν τὰ ἐνδεχόμενα, ἐξ ὧν ἐάν τε ὑπάρχωσιν οἰκεῖαι αὔξειν ἔστιν, ὅτι ἀληθεῖς μόνα τῶν μαρτυριῶν εἰσὶν αὗται, ἐάν τε ὑπεναντίαι ὦσι καὶ μετὰ τοῦ ἀμφισβητοῦντος, διαλύοι ἄν τις τἀληθῆ λέγων καθ' ὅλου τοῦ γένους τῶν βασάνων· οὐδὲν γὰρ ἧττον ἀναγκαζόμενοι τὰ ψευδῆ λέγουσιν ἢ τἀληθῆ, καὶ διακαρτεροῦντες μὴ λέγειν τἀληθῆ, καὶ ῥᾳδίως καταψευδόμενοι ὡς παυσόμενοι θᾶττον. δεῖ δὲ ἔχειν ἐναναφέρειν ἐπὶ τοιαῦτα γεγενημένα παραδείγματα ἃ ἴσασιν οἱ κρίνοντες. δεῖ δὲ λέγειν ὡς οὐκ εἰσὶν ἀληθεῖς αἱ βάσανοι· πολλοὶ μὲν γὰρ παχύφρονες, καὶ λιθόδερμοι καὶ ταῖς ψυχαῖς ὄντες δυνατοὶ γενναίως ἐγκαρτεροῦσι ταῖς ἀνάγκαις, οἱ δὲ δειλοὶ καὶ εὐλαβεῖς πρὸ τοῦ τὰς ἀνάγκας ἰδεῖν αὐτῶν καταθαρροῦσιν, ὥστε οὐδὲν ἔστι πιστὸν ἐν βασάνοις.

Cael. 293 a 27-30 πολλοῖς δ' ἂν καὶ ἑτέροις συνδόξειε μὴ δεῖν τῇ γῇ τὴν τοῦ μέσου χώραν ἀποδιδόναι, τὸ πιστὸν οὐκ ἐκ τῶν φαινομένων ἀθροῦσιν ἀλλὰ μᾶλλον ἐκ τῶν λόγων.

Here the plausility seems to rest on the argument that, if the least complex levels of being are supposed to have some explanation, the suggestion that a comparatively simple explanation applies is somehow convincing. For **ὡς ἄρα** compare

Vent. 13 εἰ δ'οὖν ἀληθὲς ὃ λέγουσιν ἄλλοι τε καὶ οἱ περὶ Κρήτην, ὡς ἄρα νῦν μείζονες οἱ χειμῶνες καὶ χιὼν πλείων πίπτει, τεκμήρια φέροντες ὡς τότε μὲν ᾠκεῖτο τὰ ὄρη, καὶ ἔφερε καρπὸν καὶ τὸν σιτηρὸν καὶ τὸ δενδρίτην, πεφυτευμένης καὶ διειργασμένης τῆς χώρας (...), εἰ δ' ἔστιν ἀληθῆ ταῦτα, καθάπερ λέγομεν, ἀναγκαῖον καὶ τοὺς ἐτησίας εἶναι πλείους.

CP I.21.2 (21.1 ἐν ἅπασι δὲ τοῖς καρποῖς τὸ περικάρπιον πρότερον μᾶλλον ἢ αὐτός γε ὁ καρπὸς καὶ τὸ σπέρμα γίνεται· τοῦτο δ' οὐ μόνον ὅτι ξυλώδη καὶ πυρηνώδη γίνεται τὰ πολλὰ τῶν σπερμάτων, τὰ δὲ τοιαῦτα συνίσταται βραδύτερον, ἀλλὰ καὶ ὅτι τέλος (ὥσπερ ἐλέχθη) τὸ σπέρμα, δεῖ δὲ τὸ ἕνεκα ἄλλου πρότερον ἢ ἐκεῖνό γε εἶναι (ἐν προϋπάρχοντι γὰρ ἡ τῶν τοιούτων γένεσις. ...) ᾗ[1] καὶ δῆλον *ὡς ἄρα* ῥᾶον ἐκπέψαι τὸ περικάρπιον· ἔοικε γὰρ ὥσπερ ὑπὸ τοῦ ἡλίου καὶ τοῦ ἀέρος καὶ τῆς ὥρας συνέψεσθαι, τὸ δὲ σπέρμα τῆς φύσεως ἰδιώτερον εἶναι.

These entities acquire certain forms or varieties (**τινὰς ἰδέας**), or (**ἤ**), less technically, as we meet them in practice, mutual differences (**πρὸς ἄλληλα**

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[1] ᾗ Schneider; ἡ U.

διαφοράς). For the use of **λαμβάνει** cp. expressions like λαμβάνειν ὄγκον (*CP* I.8.3), λαμβάνειν ὕψος (*CP* I.10.4). If the reference is to exceptional cases only, this cannot be inferred from the wording; ἰδέα may refer to a group or class to be distinguished at various levels of aggregation:

Ign. 5 πάλιν δ' ἡ τοῦ ἡλίου φύσις εἰ μὲν τοῦ πυρός τις ἰδέα, πλείστην ἂν αὕτη καὶ μεγίστην ἔχοι διαφορὰν ἀρχή τις οὖσα καὶ πρὸς ἅπαντα ἥκουσα.

HP I.14.5 ἴδιον δὲ καὶ τοῦτ' ἐφ' ἑκατέρων· τὰ μὲν γὰρ ἄγρια τῷ ἄρρενι καὶ τῷ θήλει ἢ μόνοις ἢ μάλιστα διαιροῦσι, τὰ δὲ ἥμερα πλείοσιν ἰδέαις. ἔστι δὲ τῶν μὲν ῥᾷον λαβεῖν καὶ διαριθμῆσαι τὰ εἴδη, τῶν δὲ χαλεπώτερον διὰ τὴν πολυχοΐαν.

III.8.7 οἱ μὲν οὖν ἐκ τῆς Ἴδης οὕτως διαιροῦσιν. οἱ δὲ περὶ Μακεδονίαν τέτταρα γένη ποιοῦσιν, ... δρυὸς μὲν οὖν ταύτας ποιοῦσι τὰς ἰδέας.

IV.6.2 τὰ μὲν οὖν περὶ ἡμᾶς ἐστι τάδε· φανερώτατα μὲν καὶ κοινότατα πᾶσιν τό τε φῦκος καὶ τὸ βρύον καὶ ὅσα ἄλλα τοιαῦτα· φανερώτατα δὲ καὶ ἰδιώτατα κατὰ τοὺς τόπους ἐλάτη συκῆ δρῦς ἄμπελος φοῖνιξ. τούτων δὲ τὰ μὲν πρόσγεια τὰ δὲ πόντια τὰ δ' ἀμφοτέρων τῶν τόπων κοινά. καὶ τὰ μὲν πολυειδῆ, καθάπερ τὸ φῦκος, τὰ δὲ μίαν ἰδέαν ἔχοντα. τοῦ γὰρ φύκους τὸ μέν ἐστι πλατύφυλλον ταινιοειδὲς χρῶμα ποῶδες ἔχον, ὃ δὴ καὶ πράσον καλοῦσί τινες, οἱ δὲ ζωστῆρα· κ.τ.λ.

Od. 1-2 τῶν δ' ὀδμῶν αἱ μὲν ὥσπερ ἀειδεῖς καὶ ὑδαρεῖς[1] καθάπερ ἐπὶ τῶν χυμῶν, αἱ δ' ἔχουσαί τινας ἰδέας. αἱ δ' ἰδέαι δοκοῦσι μὲν ἀκολουθεῖν ταῖς τῶν χυμῶν, οὐ μὴν ἔχουσί γε πᾶσαι τὰς αὐτὰς προσηγορίας, ὥσπερ ἐν τοῖς πρότερον εἴπομεν, οὐδ' ὅλως οὕτω διωρισμέναι τοῖς εἴδεσιν ὥσπερ οἱ χυμοὶ ἀλλ' ὡς ἂν τοῖς γένεσιν, ὅτι τὰ μὲν εὔοσμα τὰ δὲ κάκοσμα. (2) τῆς δ' εὐωδίας καὶ κακωδίας οὐκέτι τὰ εἴδη κατωνόμασται καίπερ ἔχοντα διαφορὰς μεγάλας ἐπί γ' αὐτῶν τῶν γλυκέων καὶ πικρῶν, ἀλλὰ δριμεῖα λέγεται καὶ ἰσχυρὰ καὶ μαλακὴ καὶ γλυκεῖα καὶ βαρεῖα ὀδμή· κοιναὶ δ' ἔνιαι τούτων καὶ τῶν κακωδῶν.

In fact, it might be argued that for Th. no difference other than of degree between the more common and the exceptional exists: see

HP VII.15. 2 ff. πολλὰ δὲ τοιαῦτά ἐστι καὶ ἐν ἑτέροις ἴδια· οἷον .... (3) πολλὰ δ' ἄν τις ἴσως λάβοι καὶ ἕτερα περιττά. χρὴ δέ, ὥσπερ πολλάκις εἴρηται, τὰς ἰδιότητας θεωρεῖν καὶ τὰς διαφορὰς πρὸς τὰ ἄλλα.[2] τὰ μὲν ἐν πλείοσιν ἰδέαις ἐστὶ καὶ σχεδὸν οἷον ὁμωνύμοις, ὥσπερ .... (4) τὰ δὲ ἐν ἐλάττοσιν, ὥσπερ .... ὁμοίως δὲ τοῦτο καὶ ἐφ' ἑτέρων ἐστὶ λαβεῖν, ἃ πολλὴν ἔχει διάστασιν.

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[1] "indistinct and insipid" tr. HORT.

[2] HORT's translation involves a contrast which, in my view, is not in the Greek: "Possibly one might mention many other eccentricities. *But*, as has been repeatedly said, we must *only* observe the peculiarities and differences which one plant has as compared with others." (italics added).

τῷ αὐτομάτῳ refers to a natural process; in the widest sense the expression covers what is internal to nature as a whole, including the plant itself: see e.g.

> *CP* II.1.1 περὶ δὲ τὰς βλαστήσεις καὶ καρποτοκίας τῶν δένδρων, καὶ ἁπλῶς τῶν φυτῶν, ὅσα μὴ πρότερον εἴρηται πειρατέον ὁμοίως ἀποδοῦναι, διαιροῦντας χωρὶς ἕκαστα, τά τε κατὰ τὰς ἐνιαυσίους ὥρας γινόμενα καὶ ὅσα κατὰ τὰς γεωργικὰς θεραπείας. δύο γὰρ δὴ μέρη ταῦτ' ἐστίν, τὸ μὲν ὥσπερ φυσικὸν καὶ αὐτόματον, τὸ δὲ τέχνης καὶ παρασκευῆς βουλομένης τὸ εἶναι εὖ.
>
> II.16.1 γίνονται δὲ καὶ κατὰ τὰς ὀσμάς, μάλιστα μὲν αὐτομάτως διὰ τὸν ἀέρα καὶ τὴν χώραν· εὐοσμότερα γὰρ (ὡς ἐπὶ πᾶσιν) αἱ ξηραὶ ποιοῦσιν καὶ ὁ ἀὴρ ὁ τοιοῦτος· διὸ καὶ τὰ ἄγρια εὐοσμότερα (τάχα δὲ οὐ πάντως, ὀδμωδέστερα ⟨δέ⟩, δριμύτερα γάρ· ἀρίστη δ' ἡ μέση καὶ ὁ μέσος, ἐπεὶ καὶ τὰ ἐν τῷ ὕδαρεῖ καὶ ἄοσμα).
>
> καὶ περὶ μὲν ὀσμῶν καὶ χυλῶν αὐτὰ καθ' αὑτὰ δεῖ θεωρεῖν ἐπὶ πλέον ἐν τοῖς ὕστερον. αἱ δὲ μεταβολαὶ διότι καὶ ἐν τούτοις γίνονται καὶ φυσικῶς καὶ ἐκ θεραπείας φανερὸν ἐκ τῶν εἰρημένων.

The term is associated with the absence of intention (cp. *Sud.* 22 αὐτομάτως καὶ ὡς ἂν τύχῃ); it is used also, and presumably more strictly, in situations where external natural conditions exert influence over the nature of an organism, in which case φυσικός may refer to the nature of the organism rather than to nature as a whole: compare

> *HP* II.4.4 ἄτοπον δ' ἂν δόξειε μᾶλλον εἰ ἐν τοῖς ζῴοις αἱ τοιαῦται μεταβολαὶ φυσικαὶ καὶ πλείους· καὶ γὰρ κατὰ τὰς ὥρας ἔνια δοκεῖ μεταβάλλειν, ... καὶ κατὰ τὰς τῶν τόπων ἀλλοιώσεις, ... ἀλλ' ἐκεῖνο συμβαίνει περὶ τὰ δένδρα καὶ ὅλως πᾶσαν τὴν ὕλην, ὥσπερ ἐλέχθη καὶ πρότερον, ὥστε αὐτομάτην μεταβλαστάνειν μεταβολῆς τινος γινομένης ἐκ τῶν οὐρανίων τοιαύτης. (quoted *ad* 10 b 16-9).

This is apparently why generation due to such circumstances *only* is properly called 'spontaneous' generation. For the distinction between a stricter and a wider use of the term, see

> *HP* II.1.1 αἱ γενέσεις τῶν δένδρων καὶ ὅλως τῶν φυτῶν ἢ αὐτόμαται ἢ ἀπὸ σπέρματος ἢ ἀπὸ ῥίζης ἢ ἀπὸ παρασπάδος ἢ ἀπὸ ἀκρεμόνος .... τούτων δὲ ἡ μὲν αὐτόματος πρώτη τις, αἱ δὲ ἀπὸ σπέρματος καὶ ῥίζης φυσικώταται δόξειεν ἄν· ὥσπερ γὰρ αὐτόμαται καὶ αὗται· δι' ὃ καὶ τοῖς ἀγρίοις ὑπάρχουσιν· αἱ δὲ ἄλλαι τέχνης ἢ δὴ προαιρέσεως.

But even when spontaneity applies to generation and other natural processes where both external influences and the nature of the plant are involved,[1] the

[1] See also *ad* 7 b 2-5, and commentary pp. 318 ff. above.

external influences may seem to be predominant, and to 'corrupt' the nature of the organism:

CP II.16.2-3 ἔνιαι δὲ δοκοῦσιν ὅλον τῶν δένδρων καὶ φύτων αὐτόματοί τινες εἶναι μεταβολαί, καθάπερ τὴν λεύκην ἐξαιγειροῦσθαί φασιν καὶ φύλλοις καὶ τῇ ὅλῃ προσόψει· καὶ τὸ σισύμβριον εἰς μίνθαν μεταβάλλειν μὴ κατεχόμενον ταῖς ἐργασίαις καὶ μεταφυτευόμενον πολλάκις· ἔτι δὲ καὶ τὸν πυρὸν ἐξαιροῦσθαι καὶ τὸ λίνον. (3) αὕτη μὲν οὖν, εἴπερ ἀληθής,[1] ὥσπερ φθορά τις ἔοικεν εἶναι διὰ πλῆθος ὑγροῦ (γίνεται γὰρ δι' ἐπομβρίαν)· ἀλλοιωθείσης δὲ τῆς ἀρχῆς ἀλλοῖον τὸ ἀναβλαστάνον· ἡ δ' αἶρα φίλυδρον.

In fact, in the botanical treatises examples of varieties of plants connected with external influences abound (see for instance *CP* I.11.5-6). The nature of a plant turns out to be only one of the factors relevant to the development of the organism:

HP II.8.1 διαφέρουσι δὲ καὶ αἱ χῶραι πρὸς τὰς ἀποβολάς (the shedding of the fruit)· περὶ γὰρ Ἰταλίαν οὔ φασιν ἀποβάλλειν, δι' ὃ οὐδ' ἐρινάζουσιν· οὐδ' ἐν τοῖς καταβορείοις καὶ λεπτογείοις, ... · οὐδὲ τῆς Κορινθίας ἔν τισι τόποις. ὡσαύτως δὲ καὶ ἡ τῶν πνευμάτων κατάστασις· βορείοις γὰρ μᾶλλον ἢ νοτίοις ἀποβάλλουσι, κἂν ψυχρότερα καὶ πλείω γένηται μᾶλλον· ἔτι δ' αὐτῶν τῶν δένδρων ἡ φύσις· τὰ πρῴα γὰρ ἀποβάλλει, καθάπερ ἡ Λακωνικὴ καὶ αἱ ἄλλαι. δι' ὃ καὶ οὐκ ἐρινάζουσι ταύτας. ταῦτα μὲν οὖν ἔν τε τοῖς τόποις καὶ τοῖς γένεσι καὶ τῇ καταστάσει τοῦ ἀέρος ἔχει τὰς διαφοράς.

CP I.21.3 καὶ πρὸς μὲν τὴν ἑκατέρου τελείωσιν καὶ πέψιν, τάχα δὲ καὶ τῶν φυτῶν γένεσιν ὅλως καὶ πρωϊβλαστίαν, ἅπαντα τὰ τοιαῦτα, τήν τε τοῦ ἀέρος καὶ τοῦ ἡλίου δύναμιν αἰτιατέον καὶ τὰς ἰδίας ἑκάστων φύσεις, εἴτ' οὖν ὑγρότητι καὶ ξηρότητι (καὶ πυκνότητι) καὶ τοῖς τοιούτοις μανότητι διαφερούσας, εἴτε θερμότητι καὶ ψυχρότητι, καὶ γὰρ ταῦτα τῆς φύσεως.

The δυνάμεις of winds, too, are different according to variations of the country (*CP* II.3.2), and even the characteristic differences of stones, in spite of their more inalienable identity, vary with the region:

Lap. 6 αἱ μὲν οὖν (sc. διαφοραί) κατὰ τὰ χρώματα καὶ τὰς σκληρότητας καὶ μαλακότητας καὶ λειότητας καὶ τἆλλα τὰ τοιαῦτα, δι' ὧν τὸ περιττόν, πλείοσιν ὑπάρχουσι καὶ ἐνίοις γε κατὰ τόπον ὅλον. (Compare also *ibid.* 33.)

More curiously, and perhaps less relevantly, stones are supposed to differ in quality not only according to the nature of the animals that allegedly produce them, but also to the diet and behaviour of these animals:

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[1] This conscientious addition does not, of course, detract from the fact that this *kind of explanation* is taken seriously.

Lap. 28 βελτίω δὲ τὰ τῶν ἀγρίων ἢ τὰ τῶν ἡμέρων καὶ τὰ τῶν ἀρρένων ἢ τὰ τῶν θηλειῶν ὡς καὶ τῆς τροφῆς διαφερούσης, καὶ τοῦ πονεῖν ἢ μὴ πονεῖν, καὶ τῆς τοῦ σώματος ὅλως φύσεως, ᾗ ξηρότερον τὸ δ' ὑγρότερον,

as well as according to the locality (*HP* II.5.7). Sometimes, however, the nature of a plant, paradoxically, (a) undergoes a mutation *for the better* under the influence of the power of the country: *CP* I.9.2 δύνανται γάρ τινες χῶραι διατηρεῖν τὰς φύσεις (sc. of cultivated trees), αἱ μὲν μέχρι τινός, αἱ δ' ἁπλῶς, αἱ δὲ καὶ μεθισθάναι πρὸς τὸ βέλτιον, ..., or (b) it develops better under cultivation:[1]

CP I.16.11 ff. ἡ μὲν γὰρ φύσις ἐν αὑτῇ τὰς ἀρχὰς ἔχει, καὶ λέγομεν τὸ ⟨μὲν⟩ κατὰ φύσιν (τὸ δ' ἐκ τῶν αὐτομάτων τοιοῦτον), τὸ δ' ἔξωθεν, ἄλλως τε καὶ κατὰ τέχνην, ἀφ' ἑτέρας γὰρ ἀρχῆς. ... ἡ δ' [φύσις] ἀεὶ πρός τε τὸ βέλτιστον ὁρμᾷ καὶ τοῦθ' ὥσπερ ὁμολογούμενόν ἐστιν.

ταύτῃ δὲ τὰ ἐκ θεραπείας· ἅμα γὰρ καὶ τελείωσις γίνεται τῆς φύσεως ὅταν ὧν ἐλλιπὴς τυγχάνει, ταῦτα προσλάβῃ διὰ τέχνης (οἷον τροφῆς τε ποιότητα καὶ ἀφθονίαν καὶ τῶν ἐμποδιζόντων καὶ τῶν κωλυόντων ἀφαίρεσιν), ἃ παρέχοντων δῆλον ὅτι καὶ αἱ οἰκεῖοι τόποι πρὸς ἕκαστον, ἐν οἷς δή φαμεν δεῖν θεωρεῖν τὰς φύσεις αὐτῶν.

(12) ἀλλ' ἐκεῖνοι μὲν ἀπὸ τῶν ἔξωθεν μόνον παρέχουσιν, οἷον ἀέρος καὶ πνεύματος καὶ ἐδάφους καὶ τροφῆς, ἡ δὲ γεωργία καὶ ἐν αὐτοῖς μετακινεῖ καὶ μετατίθησιν· ὥστ' εἴπερ καὶ ἐκεῖνό γε προσαπαιτεῖ πρὸς τὸ βέλτιον, καὶ ταῦτα προσδέχοιτ' ἂν ὡς ἂν οἰκεῖα· προσαπαιτεῖν δ' αὐτὴν καὶ ζητεῖν εὔλογον, ἄλλως τε καὶ ἐκ τούτων ἠρτημένην καὶ ἐν τούτοις ἔχουσαν τὰς ἀρχάς· ἐπεὶ κἀκεῖνο τοῖς αὐτομάτοις ἄτοπον συμβαίνει καὶ ὥσπερ παρὰ φύσιν, τὸ ἐκ τῶν σπερμάτων χείρω γίνεσθαι καὶ ὅλως μὲν ἐξίστασθαι τοῦ γένους· οὐδὲ γὰρ δὴ τοῦτο κατὰ φύσιν, ἀλλ' εἰς τὸ ὅμοιον ἀπογεννᾶν.

(13) αἱ μὲν οὖν ἀπορίαι σχεδὸν αὗταί τε καὶ τοιαῦται. φαίνεται δὲ καὶ ἐκ τούτων πρότερον εἶναι δῆλον ὅτι διαιρετέον τὰς φύσεις ὥσπερ καὶ τὰς πέψεις λέγομεν· τοῖς μὲν γὰρ ἡ αὐτόματος ἡ οἰκειοτέρα, τοῖς δ' ἡ θεραπείας καὶ γεωργίας, ἔνια δ' ἀμφοτέρως, ἐξ ὧν καὶ θεωρητέον, ...

Nature, then, is not conceived as a tendency within a plant searching for the best conditions nature has in store for it: even artificial circumstances are able to produce what is best for the plant better than it is able to do itself. The effect is that the qualification of κατὰ φύσιν could be used for everything which happens with some frequency:[2]

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[1] Cp. *CP* I.16.9, where it is observed that in some plants, e.g., medicinal juices develop better under cultivation.

[2] A complication disregarded in other passages, such as *CP* I.12.6: ἀλλὰ τοῦτο οὐ τῆς φύσεως θετέον, ὃ διακωλύειν ποτὲ συμβαίνει τι τῶν ἐκτός, ἀλλ' ὅσα τῇ ὁρμῇ γίνεται τῇ αὐτῆς. (If this is what is said here: the manuscripts apparently read οὕτως instead of οὐ τῆς.)

CP IV.11.7-8 ἐκ δυοῖν γὰρ ἢ καὶ πλειόνων ὅταν γένηταί τι δύναμιν ἐχόντων, ἀνάγκη κατὰ τὰς τούτων διαφορὰς καὶ τὸ ὅλον διαφέρειν (ὃ καὶ ἐπὶ τῶν ζῴων συμβαίνει· καὶ γὰρ τῷ ἄρρενι καὶ τῷ θήλει, καὶ τῇ χώρᾳ καὶ τῷ ἀέρι καὶ ὅλως ταῖς τροφαῖς, λαμβάνουσιν διαφοράς)· ὅθεν καὶ γενῶν ἰδιότητες γίνονται, καὶ πολλάκις τὸ παρὰ φύσιν ἐγένετο κατὰ φύσιν, ὅταν χρονισθῇ καὶ λάβῃ πλῆθος. (8) ἀλλὰ γὰρ τοῦτο καθόλου καὶ κοινόν. (Cp. also IV.11.5 γέγονεν γὰρ οἷον φύσις ἤδη τὸ ἔθος.)

In this context it is significant that, besides a forceful influence like πήρωσις (mutilation: *HP* I.8.4), the more general factor of τόπος too (*HP* I.8.1, I.9.5, *CP* I.11.6) appears as a factor interfering with the nature of an entity.

Considering that τῷ αὐτομάτῳ may refer to a whole range of phenomena, the reference of ταῦτα in the present passage may range from more common phenomena (e.g., with regard to different varieties of trees) to more exceptional ones (from local differences to actual excentricities).

The addition of **καὶ τῇ τοῦ ὅλου περιφορᾷ** seems to specify the notion of spontaneity: the natural entities acquire certain forms and differences spontaneously, through the rotation of the whole.[1] Th. uses similar terms when he argues that in agriculture both the external cycli of nature *and* the nature of the plant are essential:

CP III.2.5 οὐδὲ γὰρ δεῖ μᾶλλον ἀκολουθεῖν τῇ τοῦ ὅλου καταστάσει καὶ περιφορᾷ τῶν δένδρων καὶ φυτῶν καὶ σπερμάτων, ὡς πολλάκις ἁμαρτανόμενα τῇ ἀπὸ τούτων εὐκρασίᾳ καὶ τῇ αὐτῶν δυνάμει τὰ μὲν ὑπομένει, τὰ δέ τινα ἀναμάχεται, καθάπερ καὶ τῶν ἀνθρώπων φύσις ⟨τὰ⟩ ὑπὸ τῆς ἰατρικῆς.

and also

CP III.3.3 ἐπεὶ καὶ ὅπου περὶ Κύνα καὶ τοὺς ἐτησίας εὐθενεῖ καὶ ἐπιβλαστάνει τὰ δένδρα, τηνικαῦτα καὶ τὰς φυτείας ποιοῦνται, πολλῷ δέον ἀκολουθεῖν τῇ τοῦ ἀέρος κράσει καὶ τῇ τῶν φυτῶν ὁρμῇ· τάχα δὲ καὶ ἡ ὁρμὴ γίνεται διὰ τὸ περιέχον.

The question how differences in meteorological conditions may be explained in terms of the rotation of the whole might be elucidated by Aristotle's explanation of the processes of coming-to-be and passing-away: in *GC* Aristotle presents as the cause of these the ecliptic annual course of the sun, which brings variety where otherwise there would only have been continuity:

Arist. *GC* 336 a 23 – b 4 ἐπεὶ δ' ὑπόκειται καὶ δέδεικται συνεχὴς οὖσα τοῖς πράγμασι καὶ γένεσις καὶ φθορά, φαμὲν δ' αἰτίαν εἶναι τὴν φορὰν τοῦ γίνεσθαι, φανερὸν ὅτι μιᾶς μὲν οὔσης τῆς φορᾶς οὐκ ἐνδέχεται γίνεσθαι ἄμφω

[1] For the conception of rotation of the cosmos, or the heaven(s), as a kind of life—which is some solution to the problem of a regressus see 10 a 10-9. Cp. also *ad* ἔμψυχ(α), 5 b 2.

διὰ τὸ ἐναντία εἶναι· τὸ γὰρ αὐτὸ καὶ ὡσαύτως ἔχον ἀεὶ τὸ αὐτὸ πέφυκε ποιεῖν. ὥστε ἤτοι γένεσις ἀεὶ ἔσται ἢ φθορά. δεῖ δὲ πλείους εἶναι τὰς κινήσεις καὶ ἐναντίας, ἢ τῇ φορᾷ ἢ τῇ ἀνωμαλίᾳ· τῶν γὰρ ἐναντίων τἀναντία αἴτια.

διὸ καὶ οὐχ ἡ πρώτη φορὰ αἰτία ἐστὶ γενέσεως καὶ φθορᾶς, ἀλλ' ἡ κατὰ τὸν λόξον κύκλον· ἐν ταύτῃ γὰρ τὸ συνεχές ἐστι καὶ τὸ κινεῖσθαι δύο κινήσεις· ἀνάγκη γάρ, εἴ γε ἀεὶ ἔσται συνεχὴς γένεσις καὶ φθορά, ἀεὶ μέν τι κινεῖσθαι, ἵνα μὴ ἐπιλείπωσιν αὗται αἱ μεταβολαί, δύο δ', ὅπως μὴ θάτερον συμβαίνῃ μόνον. τῆς μὲν οὖν συνεχείας ἡ τοῦ ὅλου φορὰ αἰτία, τοῦ δὲ προσιέναι καὶ ἀπιέναι ἡ ἔγκλισις.

In the sequel Aristotle describes the cyclical processes in the generation of living things under the influence of the cosmic movements; the periods are not the same for all, and moreover deviations from these periods occur owing to the irregularity of matter.

The conclusion must be that here, as in the case of meteorological phenomena and of animals, the diversity of natural entities exemplifies the limits set to final causation, whose delimitation was said to be required also on theoretical grounds (see 10 a 22-5). The observation that, in the case of these least complicated kinds of natural entities, different external conditions produce different kinds characterized by different forms and properties, and that different kinds may change under the influence of external conditions, is supposed to be a reason to believe that the explanation of the various forms and properties of these, and perhaps of other, kinds of natural entities might be found in these external conditions. When we follow the course of the argument, it seems likely that ταῦτα in 10 b 27 refers to animals as well. This may seem to be corroborated by the more general scope of the sequel.

In the case of animals too, the nature of the entity should stand in some proportion to the mixture of the surrounding air: see

CP II.3.4 ἀεὶ γὰρ δεῖ λόγον τινὰ ἔχειν τὴν κρᾶσιν τῆς φύσεως πρὸς τὸ περιέχον. ἔοικε δὲ κοινὸν εἶναι τοῦτο καὶ ἐπὶ τῶν ζῴων· καὶ γὰρ τὰ ζῷα καθ' ἑκάτερον τῶν τόπων ἴδια τυγχάνει, τὰ μὲν δεχόμενα, τὰ δ' οὐ δεχόμενα τὴν τοῦ ἀέρος διάθεσιν, ὁτὲ δὲ καὶ τροφὰς οὐκ ἔχοντα τὰς οἰκείας.

Part of the persuasive force of καὶ ταῦτ' ἐν ἑτέροις κ.τ.λ., then, might consist in the fact that in the case of animals the kind of explanation to which one has recourse is less obvious, and accordingly more significant, since between an animal and its environment no such obvious connection obtains:

HP I.4.4 μεγάλη γὰρ καὶ αὕτη διαφορὰ (sc. the natural situation of a plant) καὶ οὐχ ἥκιστα οἰκεία τῶν φυτῶν διὰ τὸ συνηρτῆσθαι τῇ γῇ καὶ μὴ ἀπολελύσθαι καθάπερ τὰ ζῷα.

With regard to plants Th. in *CP* I.13.1 ff. explicitly poses the question whether a similar situation occurs to that of animals, in that their sprouting is cyclical and occurs at fixed times, or is due to the influence of external conditions such as food supply and air temperature:

CP I.13.1 ζητήσειε δ' ἄν τις ... πότερον τὰ δένδρα κατὰ χειμῶνα κύει πρὸς καρπογονίαν, τοῦ δ' ἦρος ἀποτίκτει, καὶ τοῦθ' οἷον περίοδός ἐστιν *χρόνοις ὡρισμένη*, καθάπερ τοῖς ζῴοις, ἢ διὰ τὴν ἔνδειαν τῆς τροφῆς συμβαίνει καὶ διὰ τὴν ψυχρότητα τοῦ ἀέρος. εἰ γὰρ ἐν τοῖς εὐδιεινοῖς καὶ μαλακοῖς αἰεὶ βλαστάνουσιν, *οὐκ ἂν εἴη τεταγμένη τοῖς χρόνοις* ἡ κύησις, εἰ δὲ μή, οὔτι γε ταύταις ταῖς ὥραις ὡς ὅλον ἅμα βλαστάνειν πάλιν καὶ εἴ τι τὸ ὀργῶν ἀποτίκτειν.[1]

After discussing the hypothetical question what would happen if the air were permanently mild, Th. goes on to describe the actual situation (13.3): ἐν δὲ τῇ νῦν περιόδῳ τῶν ὡρῶν ἔοικε τὰ δένδρα, κενωθέντα τοῦ θέρους ἐκ τῆς βλαστήσεως καὶ τῆς καρπογονίας, ἀντιπληροῦσθαι πάλιν, εἶτ' ἐκ ταύτης τῆς ἀντιπεριστάσεως ἀποτίκτειν καὶ βλαστάνειν κατὰ τοὺς ἱκνουμένους καιρούς, ἔχοντά πως τὴν κύησιν καὶ ⟨ἐν⟩ τοῖς μέρεσιν καὶ ἐν τοῖς ὅλοις.

Here in *CP*, then, Th. is taking it for granted that the pregnancy of animals is a cyclical process with fixed periods, rather than being dependent on food supply and meteorological conditions (the possibility that in the latter case, too, the cycles are connected, even if only συμπτωματικῶς, is not mentioned here); in a hypothetical 'ideal' situation the process of generation might no longer be cyclical (or not cyclical in the way it is). Still, as it is, the generation at least of trees is due to (ἐκ) some physical process within the plant connected with the seasons: τοῦ θέρους, κατὰ τοὺς ἱκνουμένους καιρούς. The 'proper' season, however, appears to differ according to the kind of plant involved:

CP II.2.3 διὸ καὶ οὐχ ὁ αὐτὸς ἅπασι καιρός, ὥσπερ ὁ τοῦ χειμῶνος πρὸς τὴν βλάστησιν, ἀλλ' ἕτερος ὁ τοῖς ὀψικάρποις καὶ πρωϊκάρποις, ὥσπερ καὶ τῶν σπερμάτων τοῖς τριμήνοις, καὶ ἁπλῶς τοῖς ὀψίοις καὶ πρωΐοις.

In the sequel the situation appears to be rather more complex in another respect: while spring is the season of the first annual sprouting, additional sproutings may occur in summer and autumn:

CP I.13.4 ff. τὸ μὲν οὖν ἔαρ οὐδὲ θαυμάζεται, ζωτικωτάτη γὰρ ἡ ὥρα καὶ μάλιστα γόνιμος, ὑγρά τε οὖσα καὶ θερμή· τὸ δὲ θέρος ὥσπερ ἐναντίον,

[1] "not ... in such a way that the whole tree sprouts simultaneously once more and the parts that have the impulse to do so bring forth the fruit" EINARSON/LINK.

ξηρά τε γὰρ καὶ ἐμπυρωτάτη, καὶ μάλισθ' ὑπὸ τὸ ἄστρον.[1] ἔτι τὸ μετόπωρον οὐ μόνον ξηρὸν ἀλλὰ καὶ ψυχρόν, ἤδη μεταβάλλον, ἐπιλαμβανούσης τῆς ὥρας, ἐναντιωτάτη δὲ βλαστήσει ψυχρότης καὶ ξηρότης. ἀλογία μὲν γὰρ δή τις φαίνεται διὰ τούτων. (Nevertheless this somewhat surprising situation can be explained if the nature of these seasons is taken into consideration:) οὐ μὴν οὔτε πρὸς τὰς βλαστήσεις ἐναντία ταῦτ' ἐστὶν οὔτε αὖ ἀσύμφωνα κατὰ τὰς δυνάμεις, ἀλλ' ἔχοντά τινα ὁμοιότητα. (5) δεῖ γὰρ δὴ τὴν ὥραν ὑγρότητά τινα καὶ θερμότητα ἔχειν, ὥσπερ καὶ τὸ ἔαρ. αὕτη μὲν ὁμολογουμένη μάλιστα πρὸς βλάστησιν, ἐν ἀμφοῖν δὲ τοῦτο συμβαίνει, καὶ ἐν τῇ τοῦ Κυνὸς ἐπιτολῇ ⟨καὶ⟩ μετ' Ἀρκτοῦρον· ὑπὸ γὰρ αὐτὸ τὸ ἄστρον, καίπερ ὄντος ἐμπύρου τοῦ ἀέρος, ὅμως καὶ νότια πνεῖ καὶ νέφη συνίσταται καὶ αὐτὰ τὰ δένδρα διυργαίνεται φανερῶς καὶ ὑπὸ τὸν φλοιὸν αὐτῶν διαδίδοταί τις ὑγρότης, ὅθεν καὶ αἱ ῥοαὶ καὶ κατὰ τοῦτον τὸν καιρόν, εἴτ' οὖν συνελαυνομένου τοῦ ὑγροῦ καὶ ἀντιπεριστάσεως γινομένης, εἴτε δι' ἄλλην τιν' αἰτίαν· (6: This fluidity is found in man, and in the earth itself, too; but to give the cause of each belongs to another discussion.) ὅτι δὲ ἐξυγραινομένων τῶν φυτῶν καὶ τοῦ ἔξωθεν ἀέρος οὐκ ἀντιπίπτοντος ἡ ἐπιβλάστησις οὐκ ἄλογος φανερὸν ἐκ τῶν εἰρημένων.

So, when one of the conditions is realized (and an unfavourable influence of the weather does not occur at the same time), there is, after all, nothing really surprising in these phenomena.

Apart from these general phenomena which can, after all, be accounted for, the degree in which plants are liable to such further annual sprouting depends on the condition of the tree (young, old), conditions of climate, and on the locality of the plant (I.13.8-11). In fact, when the air is well-tempered, the sprouting may occur constantly, in the smaller plants especially:

CP I.13.11 ὅλως δέ, ὃ πλεονάκις εἴρηται, μαλακοῦ καὶ ὑγροῦ τοῦ ἀέρος, καὶ τὸ σύνολον εὐκρᾶτος, αἰεὶ δυνατὸν βλαστάνειν οὐ πάντα ἀλλ' ἔνια τῶν δένδρων, τὰ δ' ἐλάττω, τούτων ἔτι μᾶλλον.

The influence of the locality is prominent also in trees:

I.13.12 ὅτι δὲ μεγάλην ῥοπὴν ὁ τόπος παρέχεται πρόσειλος ὢν καὶ εὐσκεπής, καὶ αὐτὰ τὰ δένδρα μαρτυρεῖ· φύεται γὰρ ἐν τούτοις ἔνια κατὰ τὴν ἄλλην χώραν οὐ φυόμενα, καὶ καρποφορεῖ τῶν ἄλλων οὐ φερόντων, καὶ προανθεῖ καὶ προβλαστάνει πρότερον τῶν λοιπῶν.

Finally there are also trees bearing twice (just as sheep)—but this seems to be dependent on the condition of the country and the surrounding air, too:

I.14.1 τῷ δ' ἐπὶ τῶν διφορούντων δένδρων ὅμοιόν τινα τρόπον ἐστὶν τὸ ἐπὶ τῶν προβάτων γινόμενον· ἐκεῖνα γὰρ εὐτοκήσαντα καὶ εὐγονοῦντα πά-

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[1] "in the dog days" EINARSON/LINK.

λιν ὁρμᾷ πρὸς κύησιν ἐκποιούσης ἔτι τῆς ὥρας. καὶ τὰ δένδρα παραιρεθέντων τῶν πρώτων καρπῶν γονεύει πάλιν ἑτέρους, δεῖται δ' ἴσως χώρας τε εὐτρόφου τὰ τοιαῦτα καὶ τῆς θεραπείας πλείονος, ἢ ἀμφοῖν, καὶ μάλισθ' (ὡς εἰπεῖν) τῆς τοῦ ἀέρος κράσεως ὅπως λάβῃ χρόνον ἱκανὸν εἰς τὴν κύησιν.

If a more general conclusion may be drawn from all this, I think that Th. may have in mind that the reach of teleological explanation (conceived as a tendency towards 'the best' and in terms of perfection and order) is limited also insofar as it seems that some natural phenomena are not to be accounted for by a tendency or desire for some particular form, but are apparently due to influences of the environment, interacting with the δυνάμεις inherent in the natural organisms themselves. All this seems to suggest a different kind of explanation, in which the 'good' for a natural entity, conceived as the form which it will assume, depends on a complex of circumstances, the nature of the plant being one factor among others.[1] The next paragraph will show that, according to Th., if this kind of explanation did not apply, the necessity to assume certain limits with regard to teleological explanation still does.

IX.2 (11 a 1-b 12): *Even if an explanation in terms of spontaneity does not hold water, bounds should be set to teleological explanation anyway, for the kind of explanation which combines the belief that everything in nature is heading towards the best, conceived as eternity and order, with a* ceteris paribus-*formula to account for the defective realization of this tendency is not convincing either. This principle inspires doubt, both as a general statement and as applied to particular instances, and in the latter case it gives occasion to some special pleading.*

The statement that everything in nature strives after eternity, which is realized where this is possible, is likewise questionable. For even if the de-

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[1] All the same, when viewed from the perspective of the plant, this interaction may be described in teleological terms; they may be expected to follow their natural tendency (ἡ φύσις ... ῥέπει *HP* I.6.10.; βούλεται *ibid.* I.10.2), e.g. to grow in their natural ('best') place and take the proper food (i.e. when a συμμετρία occurs between place or food and the nature of the plant in respect of heat: *HP* IV.14.6 ζητεῖ γὰρ καὶ τούτων (sc. the outward conditions) τὴν συμμετρίαν ὥσπερ καὶ τῆς τροφῆς. The same applies for generation: *CP* II.7.1 τὸ συγγενὲς τῆς φύσεως ἕκαστον ἄγει πρὸς τὸ οἰκεῖον, ἐν ᾧπερ καὶ τὰ αὐτόματα φύεται (τὸ δ' αὐτόματον μηνύει τὴν φύσιν, ὥσπερ ἐκ τῶν αὐτῶν αἱ τρόφαι καὶ αἱ γενέσεις)·... ; also *ibid.* II.9.14 ... ἐκτελεῖ (sc. τοὺς καρποὺς) καὶ πεπαίνει κατὰ τὴν τῆς φύσεως ὁρμήν.

That this expectation applies *in general* is expressed by Th. in *CP* III.6.9: τὸ γὰρ ὅλον (ὥσπερ πολλάκις εἴρηται) συμμετρίας τινὸς ἔοικεν ἕκαστα δεῖσθαι πρὸς τὴν φύσιν, ὁμοίως ἔν τε ταῖς ἄλλαις τροφαῖς καὶ ταῖς τοῦ ἀέρος μεταβολαῖς. ἀλλὰ τοῦτο μὲν ἂν εἴη καθόλου καὶ κοινόν.

sire belongs to the nature of these entities, it is evident that the majority of things are irresponsive to its call and do not receive the alleged good: only a small part of nature is endowed with soul in any case, and even in the case of animate things, their being, i.e. the portion of eternity allotted to them is minimal.

The impression which may arise from what precedes, that the good is only a minor part of nature, is valid only on the assumption that the good consists in eternity and order. In general, outside the conception of teleology referred to in the preceding, the claim that the good is something rare and comprises few things, whereas 'the bad' (τὸ κακόν) abounds, is stupid. To say that evil is predominant is justified only when evil is identified with matter.

Philosophers who maintain such a point of view cannot be advanced as authorities to support this thesis: they themselves speak without giving due weight to the facts of observation.

Both disorder and order, both inanimate and animate, both matter and form, then, are integral parts of the cosmos, and as such are good.

The teleological conceptions of Plato and the Pythagoreans in a way meet the requirement of a delimitation of the tendency towards the best. Although, with a view to the imitation assumed, they postulate a distance between the good and other entities (for whose existence the One and the indefinite dyad, respectively, are held responsible), to these philosophers the cosmos as a whole essentially depends on the presence of the one as well as of the other: contrariety exists on the level of the principles themselves. Accordingly, even God is not considered to be capable of leading everything towards what is best.—In fact, even if he could, it is unlikely that he would choose to do so, given that reducing the share of evil would eventually destroy the totality of being, which essentially consists in contraries.

11 a 1-3 εἰ δὲ μή, ... θετέον·

μή, τοῦ γ' van Raalte; μὴ τοῦθ' MSS., ZELLER (II.2.825 n. 5; "oder ταῦθ'"); μή, τοῦ θ' USENER (1861) 279.

With the manuscript reading εἰ δὲ μὴ τοῦθ', which makes ἕνεκά του καὶ εἰς τὸ ἄριστον the predicate of the conditional clause, θετέον lacks an object. It is true that τὸ ἕνεκά του καὶ εἰς τὸ ἄριστον could be supplied from the context; still, the sentence as a whole seems to be somewhat tautological, or at least lacking in argumentative force. And after what precedes, the alternative μὴ ταῦθ' proposed by ZELLER (*l.c.*) would have been more appropriate.

R-F and L-M adopt USENER's conjecture εἰ δὲ μή, τοῦ θ' ἕνεκά του κ.τ.λ.[1] According to USENER's own interpretation of εἰ δὲ μή "(d.h. wenn die Willkür ausgeschlossen werden muss in der Naturwissenschaft)" (1861) 279, the phrase is apparently supposed to answer something like (ταῦτ') οὐκ ἔχει λόγον, to be derived rather loosely from 10 b 24-5.[2]

R-F assume that 10 b 24 – 11 a 1 is parenthetical, and supply εἰ δὲ μή *sc.* τινος ἕνεκά ἐστι ταῦτα (sc. from τίνος ἕνεκα ταῦτα ζητήσειεν ἄν τις, 10 b 23-4). In view of the negative tenor of the latter ('it seems questionable whether a final cause obtains'), this interpretation of εἰ δὲ μή seems to be somewhat awkward. Moreover, it is difficult to see why the general conclusion that limits should be set to final causation, for which examples were advanced in what went before from the other levels of being, too, should be derived from the last example in particular.

It seems more likely, however, that εἰ δὲ μή presents a reaction to the suggestion which immediately precedes (τῷ αὐτομάτῳ ταῦτα καὶ τῇ τοῦ ὅλου περιφορᾷ λαμβάνει κ.τ.λ.), to the effect that if this explanation of the variety to be observed in nature does not apply, the reach of the *final* cause is limited all the same.[3] The contrast involved in this interpretation makes it likely that the original text should read **εἰ δὲ μή, τοῦ γ'** ..., with which the reasoning could be summarized as 'If an explanation in terms of spontaneity does not obtain, there are still limits to teleological explanation'; a rejection of the alternative does not detract from the inadequacy of the theory in dispute.[4] Cp. the following examples of εἰ δὲ μή, ... γε introducing what remains if a (tentative) suggestion does not apply:

> *Ign.* 3 μέγιστη δὲ αὕτη διαφορὰ δόξειεν ἄν· τὰ μὲν γὰρ καθ' αὑτὰ καὶ οὐδὲν ἐν ὑποκειμένῳ ..., ὅ γε τῇ περὶ ἡμᾶς αἰσθήσει φανερόν, εἴτ' ἀριθμητέον εἴτε μὴ ἀριθμητέον εἰς τὸ αὐτὸ τὸ φῶς. εἰ μὲν γὰρ καὶ ⟨τὸ⟩ φῶς, φανερὸν ὡς ἐν ἀέρι γε τοῦτο καὶ ὕδατι· *εἰ δὲ μή*, ⟨τὸ⟩ πῦρ τὸ *γε* τῆς φλογὸς καὶ τοῦ ἄνθρακος ⟨ἐν⟩ ὑποκειμένῳ.

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[1] The phrasing of τε ... καὶ ... does not seem to be very likely here as such: see *ad* τοῦ ... ἕνεκά του καὶ εἰς τὸ ἄριστον, below.

[2] USENER's interpretation involves a conception of ὅρους which seems quite unlikely in the present context: "mit dem Bestreben nachzuweisen, dass die Natur überall das Beste wolle, hat man irgendwelche Bestimmungen aufzustellen" (1861) 279: cp. 11 b 25 πειρατέον τινὰ λαμβάνειν ὅρον and 10 a 23 ὁ ἀφορισμὸς οὐ ῥᾴδιος.

[3] This interpretation—not including the conjecture of γ' instead of θ'—was brought forward as a possibility by SHARPLES (1989) 9. Cp. also L-M *ad loc.*

[4] Somewhat differently L-M: "Tout se passe donc comme s'il existait deux manières de limiter la portée de la téléologie; la première, positive, consiste à expliquer certains phénomènes en recourant au mécanisme; la seconde, négative, prend simplement acte de la résistance à laquelle se heurte la diffusion du bien (cf. 11b7-12)." (*ad loc.*).

Ign. 34 (where however a conjecture by Turnebus is concerned) τὸ δ' ὅλον οὐ διὰ τῶν αὐτῶν ἴσως ἑκάτερον θερμαντικόν. *εἰ δὲ μή*, οὐχ ὡσαύτως γ' ἔχον οὐδ' ὁμοίως ἑκάτερον, ἀλλ' ἄνθραξ μὲν ὁ στερεώτατος, φλὸξ δ' ἡ λεπτοτάτη καὶ πυκνοτάτη.

HP VI.1.1 πανταχοῦ μὲν οὖν ἴσως αἰεὶ τὸ ἄγριον τοῦ ἡμέρου πλεῖον, *εἰ δὲ μή*, περί *γε* τὴν φρυγανικὴν οὐσίαν.

VII.10.2 τῶν μὲν γὰρ ἅμα πως πάντων ἢ ἐγγὺς ἡ βλάστησις, *εἰ δὲ μή*, κατὰ μίαν *γε* ὥραν ὡς εἰπεῖν· ...

Arist. *Met.* α 994 b 27 καὶ ἀπείρῳ οὐδενὶ ἔστιν εἶναι· *εἰ δὲ μή*, οὐκ ἄπειρόν γ' ἐστὶ τὸ ἀπείρῳ εἶναι.

As appears from the single article, **τοῦ ... ἕνεκά του καὶ εἰς τὸ ἄριστον** stands for the one complex of teleological explanation,[1] just like τοῦ πάνθ' ἕνεκά του καὶ μηδὲν μάτην in the beginning of this chapter: this too, makes the reading of θ' ... καί seem less likely. εἰς τὸ ἄριστον brings out the most outspoken version of teleological explanation—which was not prominent in this chapter until now—in which the final cause is superlative in terms of valuation.

ληπτέον τινὰς ὅρους and **οὐκ ἐπὶ πάντων ἁπλῶς θετέον** express the practical consequence of the problem, illustrated sufficiently by now, expressed by πάνθ' (ἕνεκά του) and μηδὲν (μάτην) in 10 a 22-3. After the more theoretical exploration of the limits of teleological causation, which resulted in the suggestion that the facts which cannot be accounted for teleologically might be accounted for by a more physiological kind of explanation, Th. now turns towards the actual manifestation of teleology in the Peripatetic context. This variety of teleology is characterized by its combination of (1) an extreme optimism in its belief that everything in nature is heading for the best, with (2) its *ceteris paribus*-formula testifying to a sense of reality.

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[1] *Contra* L-M: "Sinon, il faut admettre certaines limites aux [principes] du 'en vue de quelque chose' ainsi qu'à celui du 'vers le meilleur'" (tr.), which seems a rather strong way to render their more cautious suggestion "A deux autres reprises (11b15 et 27), Théophraste semble distinguer entre deux types de finalité. On tient peut-être ici l'ébauche d'une distinction entre une téléologie purement fonctionelle (ἕνεκά του) et une téléologie de type axiologique εἰς τὸ ἄριστον." (*ad loc.*). Although in 11 b 27 Th. will have reason to distinguish the final cause as a principle of being & explanation, and the tendency towards the better as an efficient cause inherent in the things themselves, here the addition of εἰς τὸ ἄριστον seems to be accounted for by a shift in point of view, which means to bring out the prejudices involved in a conception of teleology which does not reckon with the limits to be assumed.

11 a 3-12 ἐπεὶ καὶ τὰ τοιάδε ... τιμιώτατον"·

11 a 8 αὐτὰ J²CL;[1] αὐτος P; αὕτως Isḥāq.

The necessity to assume a limit to final causation, which was exemplified by the phenomena at all levels of nature which resist explanation in terms of a final cause, chimes in with the doubt inspired by statements voicing the optimistic assumption that nature invariably desires the best, and that the best is realized wherever possible (**ἐπεὶ καί** ...). As was argued above, Th. seems to be turning now towards Peripatetic practice, and it is possible to feel that in the following statements the author of the *Characters* provides us with an outline of the kind of statements which his more confident colleagues do not hesitate to make.

ἔχει τινὰ διστασμόν: διστασμός (besides δισταγμός,[2] from διστάζω "doubt", "hesitate") seems to be at home in a dialectical context; the term implies the possibility of dispute, presumably connoting either some uneasiness on the part of the investigator, or the aptness of the subject to elicit debate; compare

> Arist. *Met.* 1091 a 13 οἱ μὲν οὖν Πυθαγόρειοι πότερον οὐ ποιοῦσιν ἢ ποιοῦσιν γένεσιν οὐδὲν δεῖ διστάζειν· φανερῶς γὰρ λέγουσιν ὡς τοῦ ἑνὸς συσταθέντος, εἴτ' κ.τ.λ.
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> *EN* 1112 b 2-11 ἀλλ' ὅσα γίνεται δι' ἡμῶν, μὴ ὡσαύτως δ' ἀεί, περὶ τούτων βουλευόμεθα, οἷον περὶ τῶν κατὰ ἰατρικὴν καὶ χρηματιστικήν, καὶ περὶ κυβερνητικὴν μᾶλλον ἢ γυμναστικήν, ὅσῳ ἧττον διηκρίβωται, καὶ ἔτι περὶ τῶν λοιπῶν ὁμοίως, μᾶλλον δὲ καὶ περὶ τὰς τέχνας ἢ τὰς ἐπιστήμας· μᾶλλον γὰρ περὶ ταύτας διστάζομεν.
>
> τὸ βουλεύεσθαι δὲ ἐν τοῖς ὡς ἐπὶ τὸ πολύ, ἀδήλοις δὲ πῶς ἀποβήσεται, καὶ ἐν οἷς ἀδιόριστον. συμβούλους δὲ παραλαμβάνομεν εἰς τὰ μεγάλα, ἀπιστοῦντες ἡμῖν αὐτοῖς ὡς οὐχ ἱκανοῖς διαγνῶναι.

For the way of phrasing cp. e.g. ὥστε τοῦτο ζήτησιν ἔχει, *Sens.* 52; ἀμφισβήτησιν ἔχει πότερα δεῖ ... ἢ ..., Arist. *EN* 1163 a 7-11.

τὰ τοιάδε ("propositions such as the following") apparently refers to statements which start from the assumption that the good is an all-pervading objective value (ἐν ἅπασιν 11 a 5-6, οὐδαμοῦ 11 a 9) which is achieved "where possible" (ἐφ' ὧν ἐνδέχεται, 11 a 6; ὅπου ... οἷόν τε 11 a 8-9).

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[1] From 11 a 1 onwards J² replaces J, which is lost: see L-M *app. crit. ad loc.*

[2] See e.g. Plut. *Mor.* 214 F λαβὼν δὲ παρὰ τοῦ μάντεως τὸ ἧπαρ ἐπέθηκε μὲν (sc. Agesilaus) ἐπὶ τὴν ὑπογεγραμμένην χεῖρα, κρατῶν δ' ἐφ' ἱκανὸν χρόνον ὑπέφαινε δισταγμὸν καὶ προσποίησιν εἶχεν ἀποροῦντος, μέχρι τῷ ἥπατι συναναλειφθέντες ἐτυπώθησαν οἱ τῶν γραμμάτων χαρακτῆρες.

The addition of **καὶ ἁπλῶς λεγόμενα καὶ καθ' ἕκαστον**,[1] which by itself emphasizes that statements of this kind are *never* reassuring, will be followed by examples which might be found in metaphysical (11 a 5-7) and biological (11 a 7-12) discussions respectively. The examples are presented vividly: ὡς δ' αὐτὰ καὶ ἐπὶ τῶν ζῴων ὁμοίως (sc. λέγεται: see below)· "ὅπου ... παραλείπει, οἷον τὸ ..."; also ἁπλῶς μὲν (sc. λεγόμενον) ὅτι "τὴν φύσιν ... ὀρέγεσθαι ...".

In spite of the irregular syntax produced by the infinitive after **ὅτι**, the insertion of τὴν φύσιν <εἰκὸς> (R-F),[2] or ἐν ἅπασιν <ἀνάγκη> (USENER (1861) 279) seems unnecessary—if only because the mixture of the two constructions ὅτι/ὡς + finite verb and infinitive occurs elsewhere, and in more polished texts.[3] In any case the sentence is meant as a mere statement of fact—so that neither εἰκός nor ἀνάγκη would be quite appropriate; one may surmise that ὅτι was added in order to mark the beginning of the citation, making the function of ἁπλῶς unambiguous without repeating λεγόμενον.

μεταδιδόναι ("give a share") is used with a non-human subject also in

> Plato *Ep.* VII 336 E 2-4 εἰδέναι μέν που χρὴ πάντα τινὰ ἄνδρα, ᾧ καὶ βραχὺ δόξης ὀρθῆς μετέδωκεν θεία τις τύχη, ὡς οὐκ ἔστιν παῦλα κακῶν τοῖς στασιάσασιν, ...

In accordance with the type of statement characterized as ἁπλῶς announced above, **τὴν φύσιν** has the most general application of a universal power ("Nature", as it were: so TRICOT). **ἐν ἅπασιν**, most comprehensively, refers to all that exists and all that happens.

The idea that there is some authority which endows the world with eternity and order as much as possible (**ἐφ' ὧν ἐνδέχεται**) recalls the Demiurge in Plato's *Timaeus*, e.g. 37 D 1 ff. καθάπερ οὖν αὐτὸ (sc. τὸ παράδειγμα) τυγχάνει ζῷον ἀίδιον ὄν, καὶ τόδε τὸ πᾶν οὕτως εἰς δύναμιν ἐπεχείρησε τοιοῦτον ἀποτελεῖν. On the other hand, the idea of Nature in this role is unmistakably Aristotelian:

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[1] I do not see how the Greek justifies TRICOT's translation: "Même, en effet, des remarques du genre de celles qui suivent nous laissent dans quelque indécision *sur le point de savoir si* nous sommes en présence d'une règle rigoureuse *ou* de cas particuliers" (italics added).

[2] After USENER (1890) "exempli causa supplevi" (*ad loc.*).

[3] Instances like this are, however, often expunged: e.g. Lys. XIII.9 (Θηραμένης) ἀνάστας λέγει ὅτι, ἐὰν αὐτὸν ἕλησε περὶ τῆς εἰρήνης πρεσβευτὴν αὐτοκράτορα, ποιήσειν ὥστε ... (ποιήσει Stephanus).

For the phenomenon "dass der abhängige Satz zwar mit ὅτι oder ὡς eingeleitet wird, aber dennoch nicht bloss nach Unterbrechung der Rede durch Einschaltung eines oder mehrerer Zwischensätze, sondern zuweilen auch in ganz einfacher Satzfügung das Prädikat des Satzes im Infinitive nachfolgt" see K-G (II.2.357).

Arist. *PA* 687 a 10-23 αἱ μὲν γὰρ χεῖρες ὄργανόν εἰσιν, ἡ δὲ φύσις ἀεὶ διανέμει, καθάπερ ἄνθρωπος φρόνιμος, ἕκαστον τῷ δυναμένῳ χρῆσθαι (προσήκει γὰρ τῷ ὄντι αὐλητῇ δοῦναι μᾶλλον αὐλοὺς ἢ τῷ αὐλοὺς ἔχοντι προσθεῖναι αὐλητικήν)· τῷ γὰρ μείζονι καὶ κυριωτέρῳ προσέθηκε τοὔλαττον, ἀλλ' οὐ τῷ ἐλάττονι τὸ τιμιώτερον καὶ μεῖζον. εἰ οὖν οὕτως βέλτιον, ἡ δὲ φύσις ἐκ τῶν ἐνδεχομένων ποιεῖ τὸ βέλτιστον, οὐ διὰ τὰς χεῖράς ἐστιν ὁ ἄνθρωπος φρονιμώτατος, ἀλλὰ διὰ τό φρονιμώτατον εἶναι τῶν ζῴων ἔχει χεῖρας. ὁ γὰρ φρονιμώτατος πλείστοις ἂν ὀργάνοις ἐχρήσατο καλῶς, ἡ δὲ χεὶρ ἔοικεν εἶναι οὐχ ἓν ὄργανον ἀλλὰ πολλά· ἔστι γὰρ ὡσπερεὶ ὄργανον πρὸ ὀργάνων. τῷ οὖν πλείστας δυναμένῳ δέξασθαι τέχνας τὸ ἐπὶ πλεῖστον τῶν ὀργάνων χρήσιμον τὴν χεῖρα ἀποδέδωκεν ἡ φύσις.

GA 788 b 20-9 ἐπεὶ δὲ τὴν φύσιν ὑποτιθέμεθα, ἐξ ὧν ὁρῶμεν ὑποτιθέμενοι, οὔτ' ἐλλείπουσαν οὔτε μάταιον οὐθὲν ποιοῦσαν τῶν ἐνδεχομένων περὶ ἕκαστον, ἀνάγκη δὲ τοῖς μέλλουσι λαμβάνειν τροφὴν μετὰ τὴν τοῦ γάλακτος ἀπόλαυσιν ἔχειν ὄργανα πρὸς τὴν ἐργασίαν τῆς τροφῆς· εἰ οὖν συνέβαινεν, ὡς ἐκεῖνος (sc. Δημόκριτος) λέγει, πρὸς ἥβην, ἐνέλειπεν ἂν ἡ φύσις τῶν ἐνδεχομένων αὐτῇ τι ποιεῖν, καὶ τὸ τῆς φύσεως ἔργον ἐγίγνετ' ἂν παρὰ φύσιν. τὸ γὰρ βίᾳ παρὰ φύσιν, βίᾳ δέ φησι συμβαίνειν τὴν γένεσιν τῶν ὀδόντων. ὅτι μὲν οὖν τοῦτ' οὐκ ἀληθές, φανερὸν ἐκ τούτων καὶ τοιούτων ἄλλων.

DA 415 a 26 – b 7 φυσικώτατον γὰρ τῶν ἔργων τοῖς ζῶσιν ὅσα τέλεια καὶ μὴ πηρώματα ἢ τὴν γένεσιν αὐτομάτην ἔχει, τὸ ποιῆσαι ἕτερον οἷον αὐτό, ζῷον μὲν ζῷον, φυτὸν δὲ φυτόν, ἵνα τοῦ ἀεὶ καὶ τοῦ θείου μετέχωσιν ᾗ δύνανται· πάντα γὰρ ἐκείνου ὀρέγεται, καὶ ἐκείνου ἕνεκα πράττει ὅσα πράττει κατὰ φύσιν. ... ἐπεὶ οὖν κοινωνεῖν ἀδυνατεῖ τοῦ ἀεὶ καὶ τοῦ θείου τῇ συνεχείᾳ, διὰ τὸ μηδὲν ἐνδέχεσθαι τῶν φθαρτῶν ταὐτὸ καὶ ἓν ἀριθμῷ διαμένειν, ᾗ δύναται μετέχειν ἕκαστον, κοινωνεῖ ταύτῃ, τὸ μὲν μᾶλλον τὸ δ' ἧττον, καὶ διαμένει οὐκ αὐτὸ ἀλλ' οἷον αὐτό, ἀριθμῷ μὲν οὐχ ἕν, εἴδει δ' ἕν.

As appears from the latter passage, animate entities are supposed to have a share in eternity (**τοῦ ἀεί**), not, however, in the form of cyclical recurrence (either cyclical processes of coming-to-be and passing-away or rotation), but only by reproduction of the kind. For **τοῦ τεταγμένου** cp. 6 b 27-8 τοῖς γὰρ τιμιωτάτοις οἰκειότατον ἡ τάξις καὶ τὸ ὡρίσθαι (with pp. 288-9 above); also

Arist. *GA* 778 b 2-6 (...) οὐ διὰ τὸ γίγνεσθαι ἕκαστον ποιόν τι, διὰ τοῦτο ποιόν τι ἐστίν, ὅσα τεταγμένα καὶ ὡρισμένα ἔργα τῆς φύσεώς ἐστιν, ἀλλὰ μᾶλλον διὰ τὸ εἶναι τοιαδὶ γίγνεται τοιαῦτα· τῇ γὰρ οὐσίᾳ ἡ γένεσις ἀκολουθεῖ καὶ τῆς οὐσίας ἕνεκά ἐστιν, ἀλλ' οὐχ αὕτη τῇ γενέσει.

The conception of teleology, then, which implies that nature invariably desires or tries to realize the best in terms of eternity and order, has an obviously Academic-Peripatetic flavour. The statement is presented with a direct-

ness which, moreover, is suggestive of some topical interest. It seems that Th. did not find the application of the final cause in his immediate context convincing.

The case of the animals (**ἐπὶ τῶν ζῴων**) is apparently advanced as an example of a non-general statement, subsumed under those καθ' ἕκαστον referred to above; significantly, the following specification of the 'best possible' organization of animals does not involve a further limitation within the genus of animals, but applies to individual specimens.

ὡς δ' αὐτά seems preferable to ὡς δ' αὔτως (see above),[1] which is the reading preferred by all modern editors, but seems to be somewhat redundant with ὁμοίως.[2] ὡς δ' αὐτά apparently should be interpreted as "and the way in which (cp. *ad* ὡς 10 b 14) these things are said similarly (ὁμοίως sc. λέγεται) with regard to the animals", with αὐτά taking up the preceding statement, and ὁμοίως adding the *mutatis mutandis*. Seeing that ὡσαύτως is more commonly used, and that here it *precedes* ὡσαύτως in 11 a 13, so that variation —if it is to be assumed for such a text as this at all—is ruled out, I prefer the less common alternative.

The modified αὐτά (i.e., the adapted version of the preceding general statement) is made explicit (**γάρ**) by ὅπου ... παραλείπει. Accordingly, there is no reason to read παραλείπειν, as R-F suggest.[3]

παραλείπει[4] here apparently intransitively "is wanting", just as the simplex verb e.g. Eur. *Hel.* 1156-7 οὔποτ' ἔρις λείψει κατ' ἀνθρώπων πόλεις.[5]

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[1] The aspiration of αὕτως, instead of the older form αὔτως, conforms to Attic practice (K-G II.1.655). In post-Homeric Greek the combined ὡσαύτως is apparently more common (*ibid.* 655-6). ὡσαύτως δέ is used in 11 a 13; also 6 b 5. In any case, I don't see how ὡς δ' αὔτως could be the counterpart of ἁπλῶς (see USENER, next note); this seems to be the function of ἐπὶ τῶν ζῴων rather. Furthermore, although the phrase is sometimes reinforced by οὕτως or κατὰ ταὐτά (K-G II.1.656), it would be strange to find it actually combined with ὁμοίως.

[2] "explicatur quod antea propositum erat καθ' ἕκαστον", USENER (1890) *ad loc.* Cp. L-M: "La formule ὡς δ' αὔτως ... ὁμοίως, redondante, reflète une certaine négligence stylistique." (*ad loc.*). It would seem just possible however to supply "and in the same manner ἔχει τινὰ δίστασμον, sc. καὶ (τὰ) ἐπὶ τῶν ζῴων ὁμοίως (λεγόμενα)"; cp. R-F: "and similarly when a corresponding statement is made ...".

[3] The option is not as clear-cut as might be inferred from their motivation of this conjecture either: "παραλείπειν should perhaps be read, this being part of τὰ λεγόμενα (l. 4). But possibly the influence of ὅτι (l. 5) may still cover παραλείπει." (R-F *ad loc.*); see however our remarks on ὅτι followed by an infinitive, and R-F's suppletion of <εἰκὸς>, above.

[4] More commonly "omit", "neglect": e.g. *Sens.* 83 τραχὺ δὲ καὶ λεῖον ὡς ἱκανῶς ὄντα φανερὰ παραλείπει καὶ οὐ λέγει (sc. Plato).

[5] It should, however, be noted that, although the syntax of the sentence is not especially favourable to this interpretation, it is just possible that ἡ φύσις should be understood as the grammatical subject (as was the case in the preceding statement): "nature never fails to realize it (sc. = the best)".

Both the coordination of two examples of teleological reasoning with regard to animals (**οἷον τὸ ... καὶ ...**) and the fact that in both cases the position (**ἔμπροσθεν, ἐν τῇ μέσῃ κοιλίᾳ**) comes first suggest that these examples are selected with a view to illustrate the kind of special pleading to which this conviction gives rise.[1] The windpipe is in front of the gullet because this is the more worthy position, and the best mixture is found in the middle ventricle of the heart, because the centre is most worthy. Even if there were no irony in this conjunction, the statement shows that (1) 'the best' (position) is a relative concept, and that, therefore, (2) there is a *structural* reason why the 'best' in terms of position cannot apply in all, or even in most cases.

The conception of teleology which combines a general direction towards what is objectively the best with a *ceteris paribus*-clausula to account for the exceptions, then, seems to be questionable from a theoretical point of view. As was said above, however, it may be that these examples are meant to convey Th.' uneasiness more lightly, by pointing towards the kind of special

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[1] For a fine illustration of teleological reasoning in which function (ἔργον) determines, or interferes with position (θέσις), see Arist. *IA* 705 a 26 – b 8 ἐπεὶ δ' εἰσὶν αἱ διαστάσεις τὸν ἀριθμὸν ἕξ, αἷς ὁρίζεσθαι πέφυκε τὰ ζῶντα, τό τε ἄνω καὶ κάτω καὶ τὸ ἔμπροσθεν καὶ ὄπισθεν, ἔτι δὲ δεξιὸν καὶ ἀριστερόν, τὸ μὲν ἄνω καὶ κάτω μόριον πάντ' ἔχει τὰ ζῶντα. οὐ μόνον γὰρ ἐν τοῖς ζῴοις ἐστὶ τὸ ἄνω καὶ κάτω, ἀλλὰ καὶ ἐν τοῖς φυτοῖς. διείληπται δ' ἔργῳ, καὶ οὐ θέσει μόνον τῇ πρός τε τὴν γῆν καὶ τὸν οὐρανόν. ὅθεν μὲν γὰρ ἡ τῆς τροφῆς διάδοσις καὶ ἡ αὔξησις ἑκάστοις, ἄνω τοῦτ' ἐστίν· πρὸς ὃ δ' ἔσχατον αὕτη περαίνει, τοῦτο κάτω. τὸ μὲν γὰρ ἀρχή τις, τὸ δὲ πέρας· ἀρχὴ δὲ τὸ ἄνω. καίτοι δόξειεν ἂν τοῖς φυτοῖς οἰκεῖον εἶναι τὸ κάτω μᾶλλον· οὐχ ὁμοίως γὰρ ἔχει τῇ θέσει τὸ ἄνω καὶ κάτω τούτοις καὶ τοῖς ζῴοις. ἔχει δὲ πρὸς μὲν τὸ ὅλον οὐχ ὁμοίως, κατὰ δὲ τὸ ἔργον ὁμοίως. αἱ γὰρ ῥίζαι εἰσὶ τὸ ἄνω τοῖς φυτοῖς· ἐκεῖθεν γὰρ ἡ τροφὴ διαδίδοται τοῖς φυομένοις, καὶ λαμβάνει ταύταις αὐτήν, καθάπερ τὰ ζῷα τοῖς στόμασιν.

τὸ μέσον belongs to the paradigm of place (τόπος): Arist. *IA* 706 b 3-16 τριῶν δ' ὄντων τόπων, τοῦ ἄνω καὶ μέσου καὶ κάτω, τὰ μὲν δίποδα τὸ ἄνω πρὸς τὸ τοῦ ὅλου ἄνω ἔχει, τὰ δὲ πολύποδα ἢ ἄποδα πρὸς τὸ μέσον, τὰ δὲ φυτὰ πρὸς τὸ κάτω. αἴτιον δ' ὅτι τὰ μὲν ἀκίνητα, πρὸς τὴν τροφὴν δὲ τὸ ἄνω, ἡ δὲ τροφὴ ἐκ τῆς γῆς. τὰ δὲ τετράποδα ἐπὶ τὸ μέσον, καὶ τὰ πολύποδα καὶ ἄποδα, διὰ τὸ μὴ ὀρθὰ εἶναι. τὰ δὲ δίποδα πρὸς τὸ ἄνω διὰ τὸ ὀρθὰ εἶναι, μάλιστα δ' ὁ ἄνθρωπος· μάλιστα γὰρ κατὰ φύσιν ἐστὶ δίπους. εὐλόγως δὲ καὶ αἱ ἀρχαί εἰσιν ἀπὸ τούτων τῶν μορίων· ἡ μὲν γὰρ ἀρχὴ τίμιον, τὸ δ' ἄνω τοῦ κάτω καὶ τὸ πρόσθεν τοῦ ὄπισθεν καὶ τὸ δεξιὸν τοῦ ἀριστεροῦ τιμιώτερον. καλῶς δ' ἔχει καὶ τὸ ἀνάπαλιν λέγειν περὶ αὐτῶν, ὡς διὰ τὸ τὰς ἀρχὰς ἐν τούτοις εἶναι ταῦτα τιμιώτερα τῶν ἀντικειμένων μορίων ἐστίν.

The centre is the best part when the principle is supposed to be there (and *vice versa*): Arist. *Juv.* 469 a 23 – b 1 κατὰ μὲν οὖν τὰ φαινόμενα δῆλον ἐκ τῶν εἰρημένων ὅτι ἐν τούτῳ (sc. the heart) τε καὶ ἐν τῷ μέσῳ τοῦ σώματος τῶν τριῶν μορίων ἥ τε τῆς αἰσθητικῆς ἀρχὴ ψυχῆς ἐστὶ καὶ ἡ τῆς αὐξητικῆς καὶ τῆς θρεπτικῆς. κατὰ δὲ τὸν λόγον, ὅτι τὴν φύσιν ὁρῶμεν ἐν πᾶσιν ἐκ τῶν δυνατῶν ποιοῦσαν τὸ κάλλιστον. ἐν τῷ μέσῳ δὲ τῆς οὐσίας τῆς ἀρχῆς οὔσης ἑκατέρας μάλιστα μὲν ἀποτελεῖ τῶν μορίων ἑκάτερον τὸ αὑτοῦ ἔργον, τό τε κατεργαζόμενον τὴν ἐσχάτην τροφὴν καὶ τὸ δεκτικόν· πρὸς ἑκατέρῳ γὰρ αὐτῶν οὕτως ἔσται, καὶ ἔστιν ἡ τοῦ τοιούτου μέση χώρα ἄρχοντος χώρα. See also below.

pleading involved in arguing that something is such and such because it is more worthy than something else.

The question whether there is a more immediately polemical aspect to the choice of these particular examples[1] may seem to be secondary, especially if the insufficiency of this type of teleological explanation is meant to be illustrated by the combination of these two statements in particular.

In *PA* Aristotle explains that some animals have an epiglottis as a remedy against the potentially harmful position of the windpipe in front of the oesophagus:

> Arist. *PA* 665 a 6-10 δι' ἣν μὲν οὖν αἰτίαν τὰ μὲν ἔχει τῶν ζῴων τὰ δ' οὐκ ἔχει, ταῦτ' εἰρήσθω, καὶ διότι τῆς ἀρτηρίας τὴν φαυλότητα τῆς θέσεως ἰάτρευκεν ἡ φύσις, μηχανησαμένη τὴν καλουμένην ἐπιγλωττίδα. κεῖται δ' ἔμπροσθεν ἡ φάρυγξ τοῦ οἰσοφάγου ἐξ ἀνάγκης.

The reason why the windpipe is in this position is that it conveys breath towards the lungs and the heart, which are of necessity located in front (the heart being the origin of locomotion and perception, the direction of which determines the notions of 'before' and 'behind'):

> Arist. *PA* 665 a 17-26 ἡ δ' ἀναπνοὴ γίνεται τοῖς ζῴοις διὰ τῆς ἀρτηρίας· ὥστ' ἐπεὶ τὴν καρδίαν ἐν τοῖς ἔμπροσθεν πρώτην ἀναγκαῖον κεῖσθαι, καὶ τὸν φάρυγγα καὶ τὴν ἀρτηρίαν πρότερον ἀναγκαῖον κεῖσθαι τοῦ οἰσοφάγου· τὰ μὲν γὰρ πρὸς τὸ πλεύμονα τείνει καὶ τὴν καρδίαν, ὁ δ' εἰς τὴν κοιλίαν.
>
> ὅλως δ' ἀεὶ τὸ βέλτιον καὶ τιμιώτερον, ὅπου μηδὲν μεῖζον ἕτερον ἐμποδίζει, τοῦ μὲν ἄνω καὶ κάτω ἐν τοῖς μᾶλλόν ἐστιν ἄνω, τοῦ δ' ἔμπροσθεν καὶ ὄπισθεν ἐν τοῖς ἔμπροσθεν, τοῦ δεξιοῦ δὲ καὶ ἀριστεροῦ ἐν τοῖς δεξιοῖς.

The example of the windpipe, then, may seem to be infelicitous, which may have contributed to its aptness from Th.' point of view.[2]

The Aristotelian treatises do not provide a parallel for the statement concerning the middle ventricle of the heart. With regard to the position of the heart itself however Aristotle does use a similar argument:

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[1] See esp. LENNOX (1985) 150-5; MOST (1988) 229-30.

[2] "Theophrastus has again been a useful guide to Aristotle's actual difficulties. His objections to these arguments were not based on their importation of prebiological value judgements into the biological realm but on their ad hoc panglossian flavor. "Nature does nothing in vain? But you yourself say the windpipe is placed most carelessly, so that nature must 'doctor things up' with the epiglottis. Even at that, as you note, we still choke on our food from time to time." There is force to this objection, but it is the objection of one biologist to another." LENNOX (1985) 154.

Contrast MOST: "Aristotle's explanation for the location of the windpipe is not at all the kind of unqualified axiological assertion Theophrastus seems to be criticizing." (1988) 230.

PA 665 b 18-23 ἔχει δὲ καὶ ἡ θέσις αὐτῆς (sc. τῆς καρδίας) ἀρχικὴν χώραν· περὶ μέσον γάρ, μᾶλλον δ' ἐν τῷ ἄνω ἢ κάτω καὶ ἔμπροσθεν ἢ ὄπισθεν· ἐν τοῖς γὰρ τιμιωτέροις τὸ τιμιώτερον καθίδρυκεν ἡ φύσις, οὗ μή τι κωλύει μεῖζον. ἐμφανέστατον δὲ τὸ λεχθέν ἐστιν ἐπὶ τῶν ἀνθρώπων, βούλεται δὲ καὶ ἐν τοῖς ἄλλοις ὁμολόγως ἐν μέσῳ κεῖσθαι τοῦ ἀναγκαίου σώματος.

See also the valuation of the centre in general, on the supposition that the ἀρχή is situated there, p. 547 n. 1 above.

Here again, whether the present statement was part of Aristotle's theory or not,[1] there seems to be little doubt that the type of explanation criticized here was.

Th.' reason for calling in question the kind of teleological explanation sketched here seems to be that it still involves an explanation of natural phenomena in terms of an over-all tendency towards a condition which is 'objectively' the best—which, notwithstanding the clausula which allows for exceptions, ignores the necessity of a more structural delimitation of this kind of causation.

Th.' uneasiness with this application of teleological explanation is apparently connected with the observation that the alleged 'best' is to be found only in a minority of entities: see 11 a 14-8.

11 a 13-8 ὡσαύτως δὲ ... τὸ εἶναι.

ἀκαριαῖον καὶ βέλτιον τὸ εἶναι MSS.; βέλτιον ⟨ὄν⟩ coni. L-M (*ad loc.*); ἀκαριαίου R-F; ἀκαριαῖον τὸ βέλτιον καὶ τὸ εἶναι Zeller II.2.825-6 n. 5; ἀκαριαῖον καὶ βέλτιον τῷ εἶναι (sc. ἔμψυχον) Usener (1861) 279 (cp. Reale); ἀκαριαῖον, κεὶ βέλτιον, τὸ εἶναι coni. R-F (read by L-M); καὶ ⟨ὧν⟩ βέλτιον τὸ εἶναι ἀκαριαι⟨τότερ⟩ον εἰς τὸ εἶναι Merlan (^{3}1975) 140.

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[1] On the basis of relevant passages in Aristotle's biological works (*PA* 666 b 33-4, *HA* 496 b 10, *PA* 665 b 18-21, 666 a 13-7 and 665 b 20-1), Lennox argues that the explanation does fit in with what Aristotle said on the subject of the heart: "Aristotle certainly believed a blending occurs in the heart, that there is a middle cavity, and that its contents are the most pure or fine. It is thus not unlikely that he also said that the blending that occurs there is best, and it occurs there because it takes place in the most honorable location. That is, this is the best place for such blending to take place, and therefore nature has arranged for it to occur there." (1985) 154.

Contrast L-M: "Même si l'on admettait, sur la base de ces textes, qu'Aristote pense effectivement que le meilleur mélange se situe dans la cavité centrale du coeur, ce ne serait pas encore assez pour lui prêter l'idée que la cavité centrale du coeur en constitue la partie 'la plus honorable' et que c'est la *raison* pour laquelle le sang qui s'y trouve est le meilleur. Peut-être Théophraste critique-t-il ici une position académique (Speusippe? ...), ou encore un stade primitif de la doctrine aristotélicienne, que *PA* et *HA* dépassent en tenant compte de la critique de Théophraste." (*ad loc.*).

With **ὡσαύτως δὲ καί** Th. somewhat loosely adds that **ὅσα κόσμου χάριν** ("what is for the cosmos' sake"), too, can be adduced as an example, viz. of the fact that explanations of this kind inspire doubt. The statement that everything in nature has a desire for eternity (cp. τοῦ ἀεί, 11 a 7), and that this is realized where possible is questionable too.

The use of the term κόσμος to indicate the permanence of the whole is a sort of short-hand; this interpretation makes the absence of the article less curious (as one might say σωτηρίας χάριν, διαμονῆς χάριν; cp. *ad* 10 b 19-20). I think, in any case, that the following explication in terms of ὄρεξις (εἰ *γὰρ* καὶ ἡ ὄρεξις, see below) is understandable only if the reference is to the issue of a desire for rest which guarantees the rotation, and thus the permanence of the cosmos;[1] see esp. II.6, 6 a 6 ff.

Both R-F and L-M assume that ὅσα κόσμου χάριν still refers to explanation of parts of animals, but with regard to a different aspect: "and similarly with the parts that are for the sake of ornament",[2] R-F; cp. also Tricot, Reale; but L-M (*ad loc.*): "On peut cependant se demander ... si'l ne s'agit pas plutôt, plus généralement, d'explications fonctionnelles, qui ne soient pas nécessairement de nature axiologique."; L-M opt for this interpretation of ὅσα κόσμου χάριν ("ce qui est en vue d'un arrangement ordonné", tr.), "qui peut s'autoriser de la distinction entre la finalité et le meilleur" *ad loc.* (cp. p. 542 n. 1 above).—See, however, τὸ εὖ in the sequel (11 a 15). I submit that the present passage regards rather an unqualified, general application of the statement τὴν φύσιν ἐν ἅπασιν ... ἐφ' ὧν ἐνδέχεται μεταδιδόναι τοῦ ἀεὶ καὶ τοῦ τεταγμένου (11 a 5-7) than a specific one (referring to e.g. animals, or parts of animals). Furthermore, the point at issue is τὸ ἀεί rather than τὸ τεταγμένον, although the term κόσμος (instead of οὐρανός) may have been chosen because it too implies order.[3]

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[1] Notwithstanding the very different picture of the divine authority who distributes its power to the other levels of being, one may compare Ps.-Arist. *De Mundo* 399 a 1-6 οὕτως ἔχει καὶ ἐπὶ κόσμου· διὰ γὰρ ἁπλῆς τοῦ σύμπαντος οὐρανοῦ περιαγωγῆς ἡμέρᾳ καὶ νυκτὶ περατουμένης ἀλλοῖαι πάντων διέξοδοι γίνονται, καίτοι ὑπὸ μιᾶς σφαίρας περιεχομένων, τῶν μὲν θᾶττον, τῶν δὲ σχολαιότερον κινουμένων παρά τε τὰ τῶν διαστημάτων μήκη καὶ τὰς ἰδίας ἑκάστων κατασκευάς.

Also *ibid.* 400 a 3 τοῦτον οὖν ἔχει τὸν λόγον ὁ θεὸς ἐν κόσμῳ, συνέχων τὴν τῶν ὅλων ἁρμονίαν τε καὶ σωτηρίαν, ...

[2] Cp. *HP* V.6.2 ὅσα περὶ τὸν κόσμον 'things for ornament', made from special kinds of wood. For this conception one might compare the passages referred to by Repici (1990) 206 f.

[3] For the idea that the cosmos which bears this name traditionally does so not coincidentally see Plato *Gorg.* 507 E 6- 8 A 4 φασὶ δ' οἱ σοφοί, ὦ Καλλίκλεις, καὶ οὐρανὸν καὶ γῆν καὶ θεοὺς καὶ ἀνθρώπους τὴν κοινωνίαν συνέχειν καὶ φιλίαν καὶ κοσμιότητα καὶ σωφροσύνην καὶ δικαιότητα, καὶ τὸ ὅλον τοῦτο διὰ ταῦτα κόσμον καλοῦσιν, ὦ ἑταῖρε, οὐκ ἀκοσμίαν οὐδὲ ἀκολασίαν.; Ps.-Arist. *De Mundo* 399 a 12-4 μία δὲ ἐκ πάντων ἁρμονία συνᾳδόντων καὶ χορευόντων κατὰ τὸν οὐρανὸν ἐξ ἑνός τε γίνεται καὶ εἰς ἓν ἀπολήγει, κόσμον ἐτύμως τὸ σύμπαν ἀλλ' οὐκ ἀκοσμίαν ὀνομάσασα.

Cp. also the paradox implied by the quotation from Heraclitus, 7 a 14-5.

For even if the desire ascribed to these entities is such (**εἰ γὰρ**[1] **καὶ ἡ ὄρεξις οὕτως**—i.e., presumably, a natural desire for eternity), it is evident that a considerable part of nature is irresponsive to this allegedly all-pervading call, since only a small part of nature is endowed with soul (which is a condition for having desire: see II.3, 5 a 28 ff.).

The word order of εἰ preceding καί[2] may indicate that Th. is prepared to take the possibility of a desire for the best seriously, the point being that the statement that it would be omnipresent—and would be fulfilled where possible—does not convince in any case. **ἀλλά ... γε** after a concessive hypothetical protasis "= *at certe*, doch gewiss, nun wenigstens" (K-G II.2.287).

ἐκεῖνο, which is the grammatical subject of **ἐμφαίνει**,[3] points forward to the observation made explicit by ὀλίγον γάρ κ.τ.λ. in 11 a 16 ff.;[4] compare

> Ps.-Plat. *Demod.* 381 A 4-7 περὶ δὲ τῆς τῶν οἰομένων ὑμῖν συμβουλεύειν προθυμίας ἐκεῖνο ἄπορον· εἰ μὲν γὰρ μὴ ταὐτὰ συμβουλεύουσι περὶ τῶν αὐτῶν συμβουλεύοντες, πῶς ἂν πάντες καλῶς συμβουλεύοιεν, μὴ συμβουλεύοντες ἃ συμβουλεύει ὁ ὀρθῶς συμβουλεύων;
>
> *HP* II.6.2 ὅτι δὲ τοιαύτην ζητεῖ χώραν κἀκεῖνο ποιοῦνται σημεῖον· πανταχοῦ γὰρ ὅπου πλῆθος φοινίκων ἁλμώδεις αἱ χῶραι· ...
>
> *CP* II.9.9 ὅτι δὲ ταῦτα αἴτια μηνύει τὸ συμβαῖνον, ἃ δὴ καὶ λέγουσί τινες· ἀποβάλλουσι γὰρ μᾶλλον ὑδατίων ἐπιγινομένων. σημεῖον δ' ἔτι κἀκεῖνο, ὅτι τοῦ συμμύσαι χάριν· ἐὰν γὰρ μὴ ἔχωσι περιάπτειν, τῇ ἄμμῳ ὑποπάττουσιν ἵνα συμμύσῃ· ...

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[1] Somewhat curiously Tricot, who translates "—Mais si tel est le désir de la nature ...": "nous remplaçons γάρ par δέ, pour mieux marquer l'opposition entre les faits favorables à la finalité de la nature qui viennent d'être cités, et les faits où la finalité est incertaine ou contestable. On peut toutefois conserver γάρ, qui explique l'*indécision*, τινὰ δίστασμον de la l. 4." (*ad loc.*).

[2] "das Eintreten der Bedingung wird damit als wirklich oder möglich zugegeben" K-G II.2.488.

[3] See also L-M. On the assumption that ἐκεῖνο is answered by διότι (as *is* the case in *Lap.* 44, quoted below) R-F and Tricot supply as a subject "the facts". More freely Reale "Ma se tale è il 'desiderio' della natura, risulta chiaramente questo: che vi sono molte cose che ...". In sofar as appears from LSJ, intransitive use of ἐμφαίνειν is not attested before Cebes, first century A.D., which observation leads R-F (*ad loc.*) to reject this option.—Even there (Cebes 21 Praechter), however, the use does not seem to be impersonal, and is in any case not quite similar to what might have been at stake here;—ὁρᾷς τὴν ὁδὸν ἐκείνην τὴν φέρουσαν ἐπὶ τὸ ὑψηλὸν ἐκεῖνο, ὅ ἐστιν ἀκρόπολις τῶν περιβόλων πάντων;—ὁρῶ.—οὐκοῦν ἐπὶ τοῦ προπυλαίου γυνὴ καθεστηκυῖα εὐειδής τις κάθηται ἐπὶ θρόνου ὑψηλοῦ κεκοσμημένη ἐλευθέρως καὶ ἀπεριέργως καὶ ἐστεφανωμένη στεφάνῳ εὐανθεῖ πάνυ καλῷ;—*ἐμφαίνει* οὕτως.—αὕτη τοίνυν ἐστὶν ἡ Εὐδαιμονία, ἔφη. (Presumably, "this is the way she looks".)

[4] Cp. 'explicative' γάρ as found after demonstratives with expressions like μαρτύριον δέ: see K-G II.2.332.

CP II.16.5 καὶ γὰρ δὴ κἀκεῖνο τὸ τῆς φύσεως ἐναντίον· ἡ μὲν γὰρ μίνθα βαθύρριζον, τὸ δὲ σισύμβριον ἐπιπολῆς καὶ οὐχ ὁμοίως πολύρριζον.

VI.6.3 τῶν δ' ἄλλων ἐκεῖνο δεῖ λαβεῖν πρῶτον ὃ κοινόν ἐστιν τῆς τῶν φυτῶν οὐσίας· πάντα γὰρ ἐν τῇ γενέσει τῶν χυλῶν μεταβάλλει κατὰ τὴν πέψιν ἐξ ἄλλων εἰς ἄλλους χυλούς, ...

With other kinds of continuation (see also 9 b 13):

CP I.13.2 ἐκεῖνο δ' ἂν τις ἴσως ἀπορήσειεν· πότερα καὶ πεπάνσεις ὅμοιαι τῶν καρπῶν ἢ ἐνδεέστεραι γίνονται, ἀσθενεστέρου ὄντος τοῦ θερμοῦ καὶ τῆς ὥρας ὑγροτέρας;

Ign. 51 τάχα δὲ κἀκεῖνο οὐ κακῶς, εἰ μὴ ἄρα καὶ ἀληθέστερον, ὡς οὔτε, ᾗ γίνεται, οὔπω ἔστιν, οὔτε, ᾗ φθείρεται, ὅμοιον ἔτι.

Vent. 54 ἐπεὶ κἀκεῖνο κατὰ λόγον ἐστίν, ὅταν ἐπιπέσωσιν ἀλλήλοις μήπω τελέως ἐκπεπνευκόσι, τὸν χειμῶνα ποιεῖν· ...

(Also *CP* II.9.9; *Lap.* 44 quoted below.)

This, i.e. the fact that animate entities constitute a minor part of nature, shows that only a minority of natural entities does not have the ὄρεξις concerned, and does not receive the good. ἐμφαίνειν usually with a direct object;[1] here it is followed by a **διότι**-clause. The use of διότι[2] may be motivated by the wish to avoid hiatus.[3] Compare e.g.

CP II.16.1 καὶ περὶ μὲν ὀσμῶν καὶ χυλῶν αὐτὰ καθ' αὑτὰ δεῖ θεωρεῖν ἐπὶ πλέον ἐν τοῖς ὕστερον. αἱ δὲ μεταβολαὶ διότι καὶ ἐν τούτοις γίνονται καὶ φυσικῶς καὶ ἐκ θεραπείας φανερὸν ἐκ τῶν εἰρημένων.

Sens. 77 ὅτι μὲν οὖν τὸ μέλαν καὶ τὸ ἐρυθρὸν αὐτῷ ἐνυπάρχει, φανερὸν εἶναι τῇ ὄψει, διότι δὲ τὸ λευκόν, τὸ λαμπρὸν καὶ διαυγὲς σημαίνειν· ταῦτα γὰρ ποιεῖν τὸ λευκόν.

Lap. 44 ἄτοπον δὲ κἀκεῖνο φαίνεται διότι ἡ μὲν ἀκόνη κατεσθίει τὸν σίδηρον, ὁ δὲ σίδηρος ταύτην μὲν δύναται διαιρεῖν καὶ ῥυθμίζειν, ἐξ ἧς δ' αἱ σφραγῖδες οὔ.

Also 465.21 FHS&G, *ad* καθάπερ πλεονάκις λέγεται 10 a 23-4, p. 489 above.

The argument that if there is a desire for the best, the result is not obvious is, of course, not new in this treatise: see especially 5 a 17, 5 a 20-1, 5 b 21-6, and the introduction to the present chapter, 10 a 25-8. For **τὸ οὐχ ὑπακοῦον**[4]

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[1] E.g. *Ign.* 66 ἐμφαίνει δέ πως καὶ τὸ νίτρον τὸ κεκαυμένον ἐν τῷ ὀρύττεσθαι τὴν τοιαύτην δύναμιν. ὅταν γὰρ ὕδωρ μικρὸν ἐπιχυθῇ, διαθερμαίνει καὶ αἴσθησιν ἐμποιεῖ κατὰ τὴν ἀφήν. With a propositional continuation however 584A.203 FHS&G ὃ δὴ καὶ ἐμφαίνειν ἔοικεν ἓν δίκαιον ἡμῖν μηδὲν εἶναι πρὸς τὰ λοιπὰ τῶν ζῴων, διὰ τὸ βλαβερὰ ἄττα τούτων εἶναι καὶ κακοποιὰ τὴν φύσιν, τὰ δὲ μὴ τοιαῦτα, καθάπερ καὶ τῶν ἀνθρώπων.

[2] διότι "hat sich ebenso wie οὕνεκα zu einem einfachen *dass* abgeschwächt" (K-G II.2.356).

[3] Cp. EINARSON (1976) xxxiii; also K-G II.2.357.

[4] The verb is also the proper term for answering the door: see e.g. *Char.* IV.9; XXVIII.3.

"what does not respond (sc. to the eternal object of desire, the call towards eternity)" cp. ταῖς ὥραις ὑπακούει *CP* I.15.1, II.11.7; ὑπακούει τῷ ἀέρι II.12.1. For **οὐδὲ δεχόμενον** τὸ εὖ compare especially ὥσπερ ἄδεκτόν τι, 5 b 18. If much (**πολύ**), or indeed the great majority of things (**μᾶλλον δὲ πολλῷ πλεῖον**), does not respond to the alleged eternal principle—and thus does not receive the good, i.e. permanence—, the conception of teleology which assumes that there is an all-pervading tendency towards eternity, realized wherever possible does not recognize the limits of teleological explanation.

On the assumption of a desire for the eternal principle (see *ad* εἰ γὰρ καί above), the fact that the animate is something scanty (**ὀλίγον ... τι τὸ ἔμψυχον**), while the inanimate, which is unable to feel any desire, is boundless (**ἄπειρον δὲ τὸ ἄψυχον**), makes clear that the great majority of things simply does not have the allegedly omnipresent tendency. Since the reference is to natural entities,[1] ἄπειρον is apparently used in a practical, non-technical sense: there are infinitely many instances of it ("countless", "boundless", "vast"): compare

Herod. I.204 (...) τὰ δὲ πρὸς ἠῶ τε καὶ ἥλιον ἀνατέλλοντα πεδίον ἐκδέκεται πλῆθος ἄπειρον ἐς ἄποψιν.

Arist. *Meteor.* 351 a 12-3 ταῦτα δ' ἐστὶν ἄπειρόν τι τῆς θαλάττης βάθος· οὐθεὶς γοῦν πώποτε καθιεὶς ἐνδυνήθη πέρας εὑρεῖν.

The tenet that there is in all things a desire for eternity is refuted not only by the fact that the animate (i.e., the part of nature which is able to feel desire at all) is a small minority; also of the animate things themselves (**αὐτῶν τῶν ἐμψύχων**) being is minimal, as well as better (**ἀκαριαῖον, καὶ βέλτιον, τὸ εἶναι**).

Although without punctuation the Greek is not too transparant, the drift of the sentence is sufficiently clear all the same: even in the case of animate entities, which are able to feel this craving for eternity, being, i.e. life, is very short. For ἀκαριαῖος[2] compare

Arist. *HA* 589 b 31 – 590 a 5 ἐν μικροῖς γὰρ μορίοις λαμβάνοντα τὰ ζῷα διαφορὰν μέγα διφέρειν φαίνονται κατὰ τὴν τοῦ ὅλου σώματος φύσιν. δηλοῖ δ' ἐπὶ τῶν ἐκτεμνομένων· μικροῦ γὰρ μορίου πηρωθέντος εἰς τὸ θῆλυ μεταβάλ-

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[1] So that non-formed matter is unlikely to be included; for which cp. Arist. *Phys.* 207 a 21-6 ἔστι γὰρ τὸ ἄπειρον τῆς τοῦ μεγέθους τελειότητος ὕλη καὶ τὸ δυνάμει ὅλον, ἐντελέχεια δ' οὔ, διαρετὸν δ' ἐπί τε τὴν καθαίρεσιν καὶ τὴν ἀντεστραμμένην πρόσθεσιν· ὅλον δὲ καὶ πεπερασμένον οὐ καθ' αὑτὸ ἀλλὰ κατ' ἄλλο· καὶ οὐ περιέχει ἀλλὰ περιέχεται, ᾗ ἄπειρον. διὸ γὰρ ἄγνωστον ᾗ ἄπειρον· εἶδος γὰρ οὐκ ἔχει ἡ ὕλη.

[2] From ἀκαρής: "properly of hair: *too short to be cut*" (LSJ s.v.); "momentary", "brief"; of size, "minute".

λει τό ζῷον, ὥστε δῆλον ὅτι καὶ ἐν τῇ ἐξ ἀρχῆς συστάσει ἀκαριαίου τινὸς μεταβάλλοντος τῷ μεγέθει, ἐὰν ᾖ ἀρχοειδές, γίνεται τὸ μὲν θῆλυ τὸ δ' ἄρρεν, ὅλως δ' ἀναιρεθέντος οὐδέτερον.

A temporal application of the term apparently occurs in

Dem. 56.30 ἐκεῖσε μέν γε ἀκαριαῖος[1] ὁ πλοῦς, καὶ δὶς ἢ τρὶς ὑπῆρχεν αὐτοῖς ἐργάσασθαι τῷ αὐτῷ ἀργυρίῳ· ἐνταῦθα δ' ἐπιδημήσαντας παραχειμάζειν ἔδει καὶ περιμένειν τὴν ὡραίαν.

In our passage the term expresses how little, in reality, there is left of the claim that all things feel a call towards eternity which is realized wherever possible: most entities are not even able to feel anything, and with those that can, the portion of being allotted to them is minimal. Since on our interpretation of ὅσα κόσμου χάριν this passage concerns the question how much justification there is for the claim that τὸ ἀεί is omnipresent in principle, i.e. where possible, 'portion of time' and 'part of reality' coincide anyway. Cp. Plato *Phaedo* 87 D 5 ἢ ἀεὶ αὐτῶν ἕκαστον ὃ ἔστι (quoted *ad* 4 a 5-6, p. 80 above).

The addition of καὶ βέλτιον makes the point that the little being that is actually found corresponds to what is, according to this teleological claim, the better;[2] a more personal note may resonate in this addition as well.[3] This relation seems to be adequately expressed by καί, which is apt to introduce a significant addition, so that there is no reason to conjecture ἀκαριαῖον, κεἰ βέλτιον, τὸ εἶναι as R-F (*ad loc.*) do.[4]

If there were anything suspicious about the Greek, καὶ βέλτιον might be bracketed as a marginal annotation by some scribe who recognized the drift of Th.'—even shorter—message.

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[1] ἀκαριαῖος A; ἀκέραιος SFQD; ἀεὶ ὡραῖος Sandys.

[2] For perishable living beings the teleological call towards eternity, of course, cannot be realized; for them perishing is natural all the same (see Arist. *Phys.* 230 a 26-31 οὔτε γὰρ ἡ μὲν γένεσις κατὰ φύσιν ἡ δὲ φθορὰ παρὰ φύσιν (τὸ γὰρ γηρᾶν κατὰ φύσιν) .... ἢ εἰ ἔστιν τὸ βίᾳ παρὰ φύσιν, καὶ φθορὰ ἂν εἴη φθορᾷ ἐναντία ἡ βίαιος ὡς παρὰ φύσιν οὖσα τῇ κατὰ φύσιν; Cp. also *GA* 788 a 4-9, quoted *ad* 10 b 19-20 (p. 521).

The drift of the present passage, then, might be that the concept of a call towards eternity might seem to be redundant.

[3] For testimonies concerning Th.' preoccupation with the shortness of *human* life, see Introd., p. 1.

[4] R-F reject this conjecture because "in Aristotle ἀκαριαῖος seems always to mean 'tiny' without reference to time" (*l.c.*); they also note that the contraction of κεἰ is perhaps not very probable. They adopt ἀκαριαιοῦ: "and of animate things themselves there is only a minute part whose existence is actually better than its non-existence would be." (cp. TRICOT).

11 a 18-22 τὸ δ' ὅλον ... ἀμαθεστάτου.

πλῆθος εἶναι A[ld] (multitudo est Barth.); πλῆθος εἶ D; πλῆθος ᾖ J[2]CLA; πλῆθος ἡ P; πλῆθος Wimmer; πληθύειν L-M; πλῆθος εἰ τοῦ κακοῦ USENER (1890).
ἐν ἀοριστίᾳ ZELLER II.2 826 n.; ἡ ἀοριστία J[2]; εἰ ἀοριστία PCLA.
εἴδει J[2]CL; εἴδη PA.

Th. realizes that the preceding negative analysis may give rise to a misunderstanding. **τὸ δ' ὅλον**[1] adds a more general point, which here involves a contrast to the preceding. Compare

Ign. 33-4 πάντων δὲ τούτων καὶ τῶν τοιούτων αἰτιάσαιτ' ἄν τις τὴν λεπτότητα καὶ τὴν παχύτητα· θερμαίνει τε γὰρ τὴν σάρκα καὶ τὸ ὕδωρ ἡ τῶν καλάμων τάχιστα διὰ τὴν λεπτότητα καὶ πυκνότηα (...) ἥ τε φλὸξ ὅλως τῶν ἀνθράκων μᾶλλον διὰ τοῦτο, καὶ ἅμα πλείων ἡ ἀπορροὴ ⟨καὶ⟩ ἀθροωτέρα. (34) τὸ δ' ὅλον οὐ διὰ τῶν αὐτῶν ἴσως ἑκάτερον θερμαντικόν. ("In general, however, it may not be for the same reasons that each has heating power", tr. COUTANT).

CP IV.3.2-3 θαυμαστὸν δ' ἂν δόξειεν τὸ τοῦ ἀβροτόνου μάλιστα διότι θερμὸν ὂν τὴν ἀλέαν διώκει· αἰτία δὲ ἡ ἀσθένεια· πρὸς ἄμφω γὰρ ἀσθενεῖ, καὶ πρὸς τοὺς χειμῶνας καὶ πρὸς τὰ καύματα. (3) τὸ δ' ὅλον οὐκ ἔοικεν ἡ θερμότης μάλιστα εὐβλαστεῖν, εἴπερ θερμὰ τὰ δριμέα· ...[2]

V.7.2-3 ἡ δὲ λεύκη πλατυφυλλότερόν τε τῆς αἰγείρου καὶ λειοφλοιότερον, καὶ τὸ ὅλον εὐτροφώτερον· ἀπογηράσκουσαν δὲ καὶ ἐλάττονι τροφῇ χρωμένην, οὐκ ἄλογον καὶ τὸ φύλλον στενότερον καὶ τὸν φλοιὸν τραχύ-

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[1] According to BONITZ (s.v.), adverbial use of τὸ ὅλον is especially frequent in *MM*; e.g. 1183 a 6-9 δῆλον τοίνυν ὅτι ὑπὲρ τοῦ ἀρίστου ἀγαθοῦ λεκτέον ἐστί, καὶ ἀρίστου τοῦ ἡμῖν ἀρίστου. τὸ δ' ὅλον ἴδοι ἄν τις ὅτι οὐκ ἔστι μιᾶς οὔτ' ἐπιστήμης οὔτε δυνάμεως τὸ ὑπὲρ παντὸς ἀγαθοῦ σκοπεῖν. ("whereas we may lay it down as an obvious general truth, ..." tr. ARMSTRONG; "And generally one can see that ...", *RevOT*); 1202 a 35-8 περὶ μὲν οὖν τιμὴν οὐκ ἔστιν ἁπλῶς ἀκρατής· ἐπαινεῖται γάρ πως ὁ περὶ τιμὴν ἀκρατής· φιλότιμος γάρ τις ἐστίν. τὸ δ' ὅλον λέγομεν καὶ ἐπὶ τῶν τοιούτων τὸν ἀκρατῆ προστιθέντες, περὶ τιμὴν ἀκρατὴς ἢ δόξαν ἢ ὀργήν. ("Yet even in the case of such things as these we do in common parlance use the word ..." tr. ARMSTRONG; "And generally when we call a man ..." *RevOT*).

I don't think the Greek justifies the pregnant interpretation of τὸ δ' ὅλον as "D'un autre côté, dire que *dans l'Univers pris comme un tout*, le Bien est quelque chose de rare, ..." (tr. TRICOT; italics added); in view of the construction with ἀμαθεστάτου, it seems unlikely, too, that τὸ δ' ὅλον would be part of the statement rejected: "But to say that *in general* the good is something rare ...", tr. R-F)—which might have been expressed by τὸ δ' ὅλως (sc. λεγόμενον ὅτι) rather.

[2] "In fact it does not appear that heat is the greatest factor in quick emergence", tr. EINARSON/LINK.

τερον ἔχειν καὶ εἴ τι ἄλλο συνακολουθεῖ τοῖς μὴ ὁμοίως εὐτρόφοις. (3) τὸ δ' ὅλον οὐκ ἄγαν ἴσως τὸ συμβαῖνον θαυμαστόν, τῷ τε εἰς τὸ σύνεγγυς καὶ εἰς τὸ ὅμοιόν πως μετάβαλλειν, ...[1]

As a kind of appendix to the preceding evaluation of Peripatetic practice, then, Th. contradicts the impression which seems to arise from what precedes, that the good is only a minor part of nature; this holds only for the teleological conception which assumes that for all things the good exists in eternity and order (cp. 11 a 5-7). Only on that assumption must one conclude that the good is found only in a small part of nature; leaving it aside, the statement that τὸ ἀγαθόν is something rare (**σπάνιόν τι**) and consists in few things (**ἐν ὀλίγοις**), whereas τὸ κακόν is a great mass (**πολὺ ... πλῆθος**) testifies to lack of insight. The previous statement that among the natural objects the better is rare and does not last anyway, was only prompted by the unrealistic expectations inherent in the conception of teleology discussed.

For the 'identifying' use of ἐν (ὀλίγοις) cp. 4 b 9; the statement rejected seems to be that the good is something rare, in the sense that there are few things which are good (cp. 365A.15-6 FHS&G σπάνιον δὲ τὸ ζῷον καὶ ὀλιγάκις φαινόμενον) rather than that it is something rare, and that there are only few things in which it is found.[2]

The text, which is distressingly corrupt anyway (see *ad* ἐν ἀοριστίᾳ, below), would be understandable without the infinitive **εἶναι**—the only reason for adopting it being that it offers some explanation for the ῃ, ῇ and εἶ of the manuscript tradition.[3]

With **οὐκ ἐν ἀοριστίᾳ δὲ** (sc. τὸ κακόν) Th. makes explicit the conception of τὸ κακόν, not observed by the pessimists who might utter the preceding statement, according to which this statement *would* make sense: saying that evil abounds *is* justified as long as it is held to consist in indeterminateness only (**μόνον**). ZELLER's conjecture restores the obvious purport of this addition; the dative case of **καὶ οἷον ὕλης εἴδει**, which explains ἀοριστίᾳ, apparently survived in a part of the manuscript tradition (see above). Compare

Arist. *GA* 778 a 3-7 τῆς δὲ τῶν ἄστρων τούτων περιφορᾶς τάχ' ἂν ἕτεραί τινες εἶεν ἀρχαί. βούλεται μὲν οὖν ἡ φύσις τοῖς τούτων ἀριθμοῖς ἀριθμεῖν τὰς

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[1] "But in general the occurrence is perhaps not very astonishing", tr. EINARSON/LINK—although with οὐκ ἄλογον in the perceding a contrast not necessarily applies.

[2] Cp. also σπάνιόν τι τὸ τίμιον ... τὸ περὶ τὴν τοῦ μέσου χώραν 11 a 23-4. *Contra* L-M "Mais [l'opinion] qu'en général le bien est quelque chose de rare et [présent] dans un petit nombre [de choses], ..." (tr.).

[3] See L-M, *app. crit. ad loc.* L-M read πληθύειν: "le mal n'*est* pas une quantité abondante, il existe en abondante quantité." (*ad loc.*).

γενέσεις καὶ τὰς τελευτάς, οὐκ ἀκριβοῖ δὲ διά τε τὴν τῆς ὕλης ἀοριστίαν καὶ διὰ τὸ γίγνεσθαι πολλὰς ἀρχάς, αἳ τὰς γενέσεις τὰς κατὰ φύσιν καὶ τὰς φθορὰς ἐμποδίζουσαι πολλάκις αἴτιαι τῶν παρὰ φύσιν συμπιπτόντων εἰσίν.

For the periphrasis by means of (ἐν) ... εἴδει + genitive,[1] see e.g.

Plato *Tim.* 30 C 2-7 τούτου δ' ὑπάρχοντος αὖ τὰ τούτοις ἐφεξῆς ἡμῖν λεκτέον, τίνι τῶν ζῴων αὐτὸν εἰς ὁμοιότητα ὁ συνιστὰς συνέστησεν. τῶν μὲν οὖν ἐν μέρους εἴδει πεφυκότων μηδενὶ καταξιώσωμεν—ἀτελεῖ γὰρ ἐοικὸς οὐδέν ποτ' ἂν γένοιτο καλόν—οὗ δ' ἔστι τἆλλα ζῷα καθ' ἓν καὶ κατὰ γένη μόρια, τουτῷ πάντων ὁμοιότατον αὐτὸν εἶναι τιθῶμεν.

Arist. *Met.* 983 b 6-8 τῶν δὴ πρώτων φιλοσοφησάντων οἱ πλεῖστοι τὰς ἐν ὕλης εἴδει μόνας ᾠήθησαν ἀρχὰς εἶναι πάντων.

Meteor. 339 a 27-9 ὥστε τῶν συμβαινόντων περὶ αὐτὸν πῦρ μὲν καὶ γῆν καὶ τὰ συγγενῆ τούτοις ὡς ἐν ὕλης εἴδει τῶν γιγνομένων αἴτια χρὴ νομίζειν.

οἷον marks the phrase as a technical (or even, Peripatetic) one: cp. οἷον κατὰ συμβεβηκός 5 b 24.

In this sense, then, things of nature may be judged bad, or evil: **καθάπερ τὰ τῆς φύσεως** (presumably: sc. κακά).[2] The unclarity of syntax may be due to a certain reserve with regard to explicitly stating "τὰ τῆς φύσεως κακά", which only applies in a very limited sense, viz. insofar as natural entities consist for the largest part of matter.—As was said *ad* 10 a 12, καθάπερ does not necessarily imply that more examples could be advanced. For καθάπερ introducing a positive case embedded in a negative propostion with which it forms a contrast, cp. e.g. *CP* I.12.4 ἁπλῶς γὰρ ὡς εἰπεῖν ἡ φύσις οὐθέν, καθάπερ ἡ τέχνη, ποιεῖ κατὰ μέρος, ἀλλὰ πάντ' ἀθρόα καταβάλλεται, ...

The disqualification involved in **ἀμαθεστάτου** is a strong one, perhaps not surprisingly so, since the statement expresses the very opposite of Th.' own view: see τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν ὄντα, 11 a 25-6. The term seems to express that a statement like this could be made only by one who had not given the subject serious thought; cp. the words ascribed to Th. by D.L.

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[1] "orationem amplificat", Ast s.v. εἶδος.

[2] R-F's translation "as *is* the case with the things of nature" (R-F) would require ἐν + dative case rather (so L-M *ad loc.*). There seems no reason to have recourse to the somewhat forceful solution of connecting the phrase progressively: "... rattachant τὰ τῆς φύσεως à ἀμαθεστάτου, nous suggérons de faire porter καθάπερ sur le dernier terme, dont la violence est ainsi quelque peu atténuée. L'idée reste qu'un individu véritablement versé dans l'étude de la nature serait moins enclin à restreindre inconsidérément la quantité du bien au profit du mal." (*ad loc.*); "... appartient à un homme pour ainsi dire complètement ignorant des choses de la nature" (tr. L-M).

(V.40, 1.42-4 FHS&G): πρὸς δὲ τὸν ἐν τῷ συμποσίῳ σιωπῶντα τὸ ὅλον ἔφη, "εἰ μὲν ἀμαθὴς εἶ, φρονίμως ποιεῖς· εἰ δὲ πεπαίδευσαι, ἀφρονῶς."[1]

ἀμαθία may connote a lack of awareness of the significance or value of things in particular:[2] in *Char.* IV.1 ἀγροικία is characterized as an ἀμαθία ἀσχήμων, and a boorish person, among other things, is said to ignore what is amazing but to be struck by the most commonplace things (ἐπ' ἄλλῳ μὲν μηδενὶ ⟨μήτε θαυμάζειν⟩ μήτε ἐκπλήττεσθαι ἐν ταῖς ὁδοῖς, ὅταν δὲ ἴδῃ βοῦν ἢ ὄνον ἢ τράγον, ἑστηκὼς θεωρεῖν IV.5); compare also

Andoc. II.2 δεῖ γὰρ αὐτοὺς ἤτοι ἀμαθεστάτους εἶναι πάντων ἀνθρώπων, ἢ τῇ πόλει ταύτῃ δυσμενεστάτους. εἰ μέν γε νομίζουσι τῆς πόλεως εὖ πραττούσης καὶ τὰ ἴδια σφῶν αὐτῶν ἄμεινον ἂν φέρεσθαι, ἀμαθέστατοί εἰσι τὰ ἐναντία νῦν τῇ ἑαυτῶν ὠφελείᾳ σπεύδοντες· ...

Plato *Prot.* 358 C 2-5 τί δὲ δή; ἀμαθίαν ἆρα τὸ τοιόνδε λέγετε, τὸ ψευδῆ ἔχειν δόξαν καὶ ἐψεῦσθαι περὶ τῶν πραγμάτων τῶν πολλοῦ ἀξίων;—καὶ τοῦτο πᾶσι συνεδόκει.

Allowing for the very different context, a misconception of what is really good seems to be at issue in the present passage too; for the metaphysical implications of this simplistic misjudgement cp. 11 b 10-2 τάχα δ' οὐδ' ἂν προέλοιτ', εἴπερ ἀναιρεῖσθαι συμβήσεται τὴν ὅλην οὐσίαν ἐξ ἐναντίων γε καὶ ⟨ἐν⟩ ἐναντίοις οὖσαν; cp. also the unrealistic expectation ὁ δὲ τοιοῦτος λόγος ἐγγὺς τοῦ ζητεῖν ὅτι οὐ πάντ' ἀγαθὰ οὐδὲ πάντα ὅμοια formulated in 8 a 27 – b 1.

11 a 22-5 εἰκῇ γὰρ ... ἑκαθέρωθεν).

εἰκῇ γὰρ SYLBURG (1585); εἰ γὰρ καὶ C, Barth.; εἰ καὶ γὰρ A; καὶ γὰρ J²; καὶ L.
ἀμαθεστάτου ει· καὶ γὰρ PA², Tiph.; ἀμαθεστάτου ἐστί· καὶ γὰρ USENER (1861) 280, L-M; ἀμαθεστάτου ⟨ἂν εἴη⟩· καὶ γὰρ MERLAN (³1975) 140.

Again an apparently distorted, and in any case an anacolouthic sentence in which a main verb is lacking and cannot even easily be supplied from the context. In any case, the position of γάρ following εἰ καί can hardly be correct.

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[1] More specifically 130.8 FHS&G (= Galenus *Meth. med.* 1.3) οὐδεὶς γὰρ ἦν οὕτως ἀπαίδευτος οὐδ' ἀμαθὴς λογικῆς θεωρίας ὡς διαφορὰν εἰδῶν εἰπεῖν ἀντ' οὐσίας.

[2] The use of (dis)qualifying terms in this kind of context deserves more detailed study (see also *ad* τελέου καὶ φρονοῦντος 6 a 19 above). Cp. ἀγνωμονεστάτους 85 B.4-5 FHS&G; εὐήθεια 184.172 FHS&G, for which see also e.g. *Sens.* 47; 48; *HP* VIII.6.2.

Although εἰκῇ λέγειν may seem to be a rather strong expression to use with reference to one's colleagues,[1] it seems best to adopt, with R-F, SYLBURG's reading of **εἰκῇ γάρ**.[2] I take it that "those who speak about being as a whole" (**οἱ περὶ τῆς ὅλης οὐσίας λέγοντες**, cp. τὴν ὅλην οὐσίαν ἐξ ἐναντίων γε καὶ ⟨ἐν⟩ ἐναντίοις οὖσαν, 11 b 11) refers to philosophers or metaphysicians in general; Speusippus will be adduced as an example. The reference is limited by an implicit <when they make a similar assertion>, as may be inferred from the specification of this point of view where Speusippus is concerned.[3] For the way of phrasing compare Arist. *Met.* 1086 a 23 οἱ περὶ μόνης τῆς αἰσθητῆς οὐσίας διορίζοντες.

The reasoning involved in γάρ seems to be that the fact that specialists maintain it cannot be adduced in support of the simplistic statement, rejected above, that the good is found only in a small part of nature. Professional spokesmen <when they make a similar assertion> themselves talk at random (εἰκῇ, sc. λέγουσιν), i.e., without giving due weight to the facts of observation. εἰκῇ (λέγειν) is here said of educated people, when they make assertions which are supposed to have no correspondence with reality (and thus have no authority if they arrive at the same conclusion as the pessimists amongst us): compare e.g.

> Arist. *Met.* 984 b 15-8 νοῦν δή τις εἰπὼν ἐνεῖναι, καθάπερ ἐν τοῖς ζῴοις, καὶ ἐν τῇ φύσει τὸν αἴτιον τοῦ κόσμου καὶ τῆς τάξεως πάσης οἷον νήφων ἐφάνη παρ' εἰκῇ λέγοντας τοὺς πρότερον.

With more concrete reference, said of a question without a definite subject-matter:

> Arist. *SE* 172 b 13-6 τὸ γὰρ μηδὲν ὁρίσαντα κείμενον ἐρωτᾶν θηρευτικόν ἐστι τούτων· εἰκῇ γὰρ λέγοντες ἁμαρτάνουσι μᾶλλον· εἰκῇ δὲ λέγουσιν ὅταν μηδὲν ἔχωσι προκείμενον.

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[1] See e.g. Arist. *EE* 1216 b 40 – 1217 a 7 εἰσὶ γάρ τινες οἳ διὰ τὸ δοκεῖν φιλοσόφου εἶναι τὸ μηθὲν εἰκῇ λέγειν ἀλλὰ μετὰ λόγου πολλάκις λανθάνουσι λέγοντες ἀλλοτρίους λόγους τῆς πραγματείας καὶ κενούς (τοῦτο δὲ ποιοῦσιν ὁτὲ μὲν δι' ἄγνοιαν ὁτὲ δὲ δι' ἀλαζονείαν), ὑφ' ὧν ἁλίσκεσθαι συμβαίνει καὶ τοὺς ἐμπείρους καὶ δυναμένους πράττειν ὑπὸ τούτων τῶν μήτ' ἐχόντων μήτε δυναμένων διάνοιαν ἀρχιτεκτονικὴν ἢ πρακτικήν.

"L'expression … ne semble pas être appropriée pour qualifier une position qui est moins répréhensible par son caractère arbitraire que par sa fausseté", L-M *ad loc.*—But see below.

[2] L-M *ad loc.*: "en apparence plus proche des lettres transmises", sc. than USENER's conjecture of ἀμαθεστάτου ἐστί, adopted by them.

[3] Accordingly there is no point in trying to identify other philosophers possibly referred to: οἱ περὶ τῆς ὅλης οὐσίας λέγοντες is just 'specialists', those supposedly authorized to pronounce on the subject of nature and being.
For a survey of the extensive discussion on the referent of this phrase see TARÁN (1981) 444 ff.

Speusippus is brought forward as an example of such specialists whose doctrines might seem to support a gloomy picture of the world in which the 'bad' predominates. This philosopher holds the valuable situated in the region of the centre (**τὸ τίμιον ... τὸ περὶ τὴν τοῦ μέσου χώραν**)[1] to be something rare (**σπάνιόν τι ... ποιεῖ**). Two main conceptions with regard to the reference of this phrase may be distinguished (see TARÁN (1981) 444 ff.); it is conceived either (1) as it were physically as the centre of the cosmos—to be interpreted either (a) as the world-soul (ZELLER)[2] or (b) as the central fire (FRANK (1923) 207 ff., 252, 286, R-F, TRICOT); or (2), ontologically, as the centre of the spheres of being: MERLAN ([3]1975) 110, 115, 140,[3] KRAEMER (1973) 210, REALE 74-5, 204; also TARRANT (1974).[4]

Given the scanty testimony, the discussion not surprisingly concentrates upon the question which of these potential references qualifies for being conceived as τὸ τίμιον by Speusippus. In this respect TARÁN takes a special position insofar as he supposes that what is said here cannot be ascribed to Speusippus at all; according to him Th. himself is giving a cosmological twist to an originally ethical theory by Speusippus: see below.

Now as far as our treatise is concerned, both wording and context suggest that τὸ περὶ τὴν τοῦ μέσου χώραν refers to the region around the centre of the universe (see *ad* περὶ τῆς ὅλης οὐσίας, above), i.e. to the sublunary world: see τῶν ... περὶ τὸ μέσον 5 b 12 , and Arist. *GC* 334 b 31-2 ἅπαντα δὲ τὰ μικτὰ σώματα, ὅσα περὶ τὸν τοῦ μέσου τόπον ἐστίν, ἐξ ἁπάντων σύγκειται τῶν ἁπλῶν. As TARÁN points out, the idea that τὸ τίμιον is found in the sublunary region is in accordance with Aristotle's testimony to the effect that Speusippus ascribed more value to the product than to the principles:

Arist. *Met.* 1072 b 30-4 ὅσοι δὲ ὑπολαμβάνουσιν, ὥσπερ οἱ Πυθαγόρειοι καὶ Σπεύσιππος τὸ κάλλιστον καὶ ἄριστον μὴ ἐν ἀρχῇ εἶναι, διὰ τὸ καὶ τῶν φυτῶν καὶ τῶν ζῴων τὰς ἀρχὰς αἴτια μὲν εἶναι τὸ δὲ καλὸν καὶ τέλειον ἐν τοῖς ἐκ τούτων, οὐκ ὀρθῶς οἴονται.

1091 a 29-36 ἔχει δ' ἀπορίαν καὶ εὐπορήσαντι ἐπιτίμησιν, πῶς εἴχει πρὸς τὸ ἀγαθὸν καὶ τὸ καλὸν τὰ στοιχεῖα καὶ αἱ ἀρχαί, ἀπορίαν μὲν ταύτην, πότερόν ἐστί τι ἐκείνων οἷον βουλόμεθα λέγειν αὐτὸ τὸ ἀγαθὸν καὶ τὸ ἄριστον, ἢ οὔ, ἀλλ' ὑστερογενῆ. παρὰ μὲν γὰρ τῶν θεολόγων ἔοικεν ὁμολο-

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[1] The phrase is simply attributive τὸ τίμιον; *contra* R-F "when he makes the valuable element to be something scanty, namely, what is found in the region of the centre of the universe" (tr.).

[2] II.1.1000 with n. 3.

[3] According to TARÁN anyway: but see p. 561 n. 2 below.

[4] TARRANT (1974) 134: "though the language of Theophrastus is physical in nature, it is hard to see how goodness could be concentrated at the centre of a cosmic system, which was traditionally the earth."

γεῖσθαι τῶν νῦν τισίν, οἵ οὔ φασιν, ἀλλὰ προελθούσης τῆς τῶν ὄντων φύσεως καὶ τὸ ἀγαθὸν καὶ τὸ καλὸν ἐμφαίνεσθαι ("we can say with certainty that these lines refer to Speusippus", TARÁN (1981) 341).

According to TARÁN "we can be reasonably certain that in the Speusippean universe goodness and beauty appear only at the level of soul and of the sensibles. For we have evidence that Speusippus related these two concepts to living beings, that he believed in the immortality of the human soul, and that he probably spoke of good and wise men as divine" ((1981) 44). If indeed the expression τὸ περὶ τὴν τοῦ μέσου χώραν refers to the sublunary region, then, the animate[1] sensibilia are likely to be at stake here, which as compared to the whole (τὸ πᾶν) anyway might be said to make up only a small part of it (cp. 11 a 16-7)—especially if one tends to make much of the different provinces of being, as Speusippus seems to have done for numbers and magnitudes at least (see 6 b 5-6, with pp. 264-6 *ad loc.*).

Now if this interpretation holds water, it appears that the distinction between a cosmological and an ontological point of view is begining to vanish —as might happen quite naturally at least as far as Th. is concerned.[2]

τὰ δ' ἄκρα καὶ ἑκατέρωθεν "the other things being extremes and on either side of it", perhaps taking up the geometrical aspect of τὸ μέσον. For the absence of μέν cp. e.g. Arist. *GC* 319 b 17-8 γένεσις ἤδη τὸ τοιοῦτον, τοῦ δὲ φθορά; also 4 a 15 above.

CHERNISS[3] was the first to suggest that "this is ... most probably a reference to Speusippus' ethical argument that only the mean is good, the terms on either side being contrary to it as well as to each other", with reference to, *inter alia*, Anon. *In EN* p. 452.31-6 (Fr. 80 d Tarán):

> ἔλεγεν ὁ Σπεύσιππος ὅτι ὡς τὸ μεῖζον ἀντίκειται τῷ ἐλάττονι καὶ τῷ ἴσῳ, καὶ τὰ μὲν ἄκρα, ἤτοι τὸ μείζον καὶ τὸ ἔλαττον, ἐστὶν κακά, τὸ δὲ μέσον, ἤτοι τὸ ἴσον ἀγαθόν ἐστιν, οὕτως καὶ ἡ ἡδονὴ ἀντίκειται τῇ ἀλυπίᾳ καὶ τῇ λύπῃ, καὶ τὰ μὲν ἄκρα, ἤτοι ἡ λύπη καὶ ἡ ἡδονή, εἰσὶ κακά, τὸ δὲ μέσον, ἤτοι ἡ ἀλυπία, ἀγαθόν ἐστιν.

Furthermore CHERNISS points out that "Aristotle himself uses the same words

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[1] It may be noted that this is the conclusion also of TARRANT's interpretation of τὸ περὶ τὴν τοῦ μέσου χώραν as referring to the *ontological* centre: "The ideals fall in the central realm, that of soul" ((1974) 139). According to TARRANT Speusippus would have distinguished five 'kinds', corresponding to five ὕλαι, occupied by numbers, geometricals, psychicals, bodies, and φαυλότατα respectively, goodness being found in the psychicals only (*o.c.* 144).

[2] MERLAN ascribes the absence of this distinction to Speusippus himself: "there is no difference between cosmology and ontology in the Academic system, and we should not be surprised to see those two points of view hardly distinguishable in Theophrastus' *Metaphysics.*" (([3]1975)110).

[3] (1944) 559; see also TARÁN (1981) 448 f.

with regard to virtue as a mean, saying that goodness is σπάνιον because it is a μέσον of ἄκρα" (*ibid.*): see

> Arist. *EN* 1109 a 29-33 (...·) διόπερ τὸ εὖ καὶ σπάνιον καὶ ἐπαινετὸν καὶ καλόν. διὸ δεῖ τὸν στοχαζόμενον τοῦ μέσου πρῶτον μὲν ἀποχωρεῖν τοῦ μᾶλλον ἐναντίου .... τῶν γὰρ ἄκρων τὸ μέν ἐστιν ἁμαρτωλότερον τὸ δ' ἧττον· (κ.τ.λ.).

Tarán may be right that the application of this model to the cosmos as a whole should not be ascribed to Speusippus' but to Th. himself.[1]

τὰ δ(έ), then, apparently subsumes everything except the animate entities which occupy the middle region, in relation to whose central position these other things constitute the 'extremes' (ἑκάτερωθεν): both below and higher up in the cosmos or being. This may comprise inanimate entities, the elements, the heavenly bodies, and the 'highest principles' (according to Speusippus, the numbers and the One).—Again, as far as Th. is concerned at least, we should not be worried by the fact that when we try to identify the entities comprised by τὰ δ', ingredients of the cosmos and of being come to mind at the same time, since everything which contributes to the existence (and to our understanding) of the universe is, *ipso facto*, part of the comprehensive whole.

τὰ δ' ἄκρα καὶ ἑκατέρωθεν leaves implicit Speusippus' qualification of the regions on both sides of the center,[2] the statement σπάνιόν τι τὸ τίμιον being sufficient to indicate why unconsidered opinions with regard to the predominance of evil in the cosmos might seem to be supported by theories of people like Speusippus. In fact, it seems very likely that Th. was aware that Speusippus cannot justly be advanced as a metaphysician who holds that evil abounds.[3] A reason why Speusippus is nevertheless advanced as a professional philosopher who seems to support the point of view criticized here

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[1] Th. would be "refuting his own inference from Speusippus' theory of good and evil; but the inference is justified from his point of view." (Tarán (1981) 449). If so, Th.' inference would be justified, not, I think, because "Speusippus' conception of the principles is incompatible with the Aristotelian doctrine of the unmoved mover as the highest good ... and of evil as purely negative" (*l.c.*), but rather since the model which restricts the good to only a part of being is essentially in conflict with the idea of the cosmos as a coherent whole, to which all parts contribute—so that all components are 'good' in this sense: this in any case seems to be what the following conclusion of τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν ὄντα seems to be telling us: see below.

[2] Accordingly, as Merlan (^{3}1975) 111 ff. points out, whereas the idea that σπάνιόν τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν could be ascribed to Speusippus, πολὺ ... πλῆθος εἶναι τὸ κακόν cannot reasonably be ascribed him.

[3] *Contra* Tarán: "The fact that Speusippus obviously regarded some things, e.g. numbers and magnitudes, as neither good nor evil is disregarded by Theophrastus." (1981) 449. Noticeably, J^2 adds (ἑκατέρωθεν) μὴ τοιαῦτα: L-M *app. crit.*

may be found in the isolated position of the little good which he does assume; cp. Ch. III (6 b 5-6) where he is blamed for his failure to explain how the numbers generate the natural entities. This is precisely the respect in which Plato and the Pythagoreans are doing better: see 11 a 26 ff.

11 a 25-6 τὰ μὲν οὖν ... ὄντα.

With some abruptness this phrase adds as a conclusion (**μὲν οὖν**) the point of view on the basis of which statements of the type exemplified above were rejected.[1] As was argued above, the present passage (11 a 18-26) is something like an appendix to the preceding discussion.

It does not seem necessary to ascribe to μὲν οὖν a 'corrective' value, as R-F (*ad loc.*) do. Cp. e.g. 4 b 16-7, 6 b 11.

As it happens, then, reality—or: things that are (**τὰ ὄντα**)—are good (**καλῶς ἔτυχεν ὄντα**). For τυγχάνειν expressing that a situation is just as it is, cp. *Vent.* 1 ὡς γὰρ ἁπλῶς εἰπεῖν, ἐν τούτοις καὶ περὶ ταῦτα τυγχάνουσιν αἱ ζητήσεις ἐν οἷς καὶ τὰ περὶ τῶν ζῴων καὶ φυτῶν ἐμπεριλαμβάνεται. With reality as the subject, the ('gnomic') aorist expressing that the situation does not apply only now is appropriate.

On the basis of this conviction, then, there is neither a reason to assume that everything in nature has a desire or tendency towards the best, which is realized where possible; nor a justification for the complaint that being consists for the main part in evil. The idea seems to be that both order and disorder, both animate and inanimate, both form and matter[2] are integral parts of the cosmos, and therefore also good.

11 a 27 – b 1 Πλάτων δὲ ... ἅπαντα.

ἐπεὶ μιμεῖσθαι γ' ἐθέλειν L-M ("et iam Allan", L-M *app. crit.*); ἐπιμιμεῖσθαι γ' ἐθέλειν P; ἐπιμιμεῖσθαι γε θέλειν J²CLA; ἐπιμιμεῖσθαι δ' ἐθελεῖν R-F; ἐπι ** μιμεῖσθαι γ' ἐθέλειν Usener (1890); ἐπι⟨νοοῦντες τῶν τῇδε ἀποφαίνονται τὸ ἓν⟩ μιμεῖσθαι γ' ἐθέλειν coni. Usener (1890); μακρὰν "(vielleicht διάφορον?)" τὴν ἀπόστασιν ἀποστάντα μιμεῖσθαι τὸ θεῖον ἅπαντα Usener (1861) 281; ἐπι⟨νοήσαντες τῶν ἀρχῶν οἴονται τὸ ἓν⟩ μιμεῖσθαι γ' ἐθέλειν DK I.454.28-9.

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[1] Cp. L-M "Ce qui est se trouve donc être bon."; Reale: "Gli esseri, dunque, sono e sono stati sempre buoni". Catan, who diverges from Reale by reading καὶ γάρ instead of εἰκῇ γάρ renders μὲν οὖν adversatively: "But beings are and always have been good", and makes Reale's note incomprehensible.

[2] Cp. the conception that evil would be evil *only* in insofar as it consists indeterminateness and matter, 11 a 20-1.

After the more theoretical discussion of the necessity of a delimitation of final causation (10 a 22 – 11 a 1) and Th.' analysis of Peripatetic practice in this respect (11 a 3-18)—with an appendix on a popular gloomy view which might seem to find professional corroboration from philosophers like Speusippus (11 a 18-25), Th. goes on to discuss the theory of 'Plato and the Pythagoreans'[1] on the subject, which in a way meets the requirement that certain limits to the tendency towards the best should be assumed.

About Plato and the Pythagoreans two statements seem to be made: they make the distance a great one, and they say that all things wish to imitate <the good>. However, the syntax of the sentence, and consequently the relation between these two opinions, is not quite clear. Moreover, the text has been questioned on account of the unparalleled compound ἐπιμιμεῖσθαι:[2] see esp. the conjectures by Usener and DK. R-F retain ἐπιμιμεῖσθαι ("quite possible in itself", *ad loc.*), propose to "substitute δ' for γ', both μακρὰν τὴν ἀπόστασιν (*sc.* εἶναι) and ἐπιμιμεῖθαι ἐθέλειν ἅπαντα being taken to depend on ποιοῦσι, understood from ποιεῖ, a24.", (R-F *ad loc.*). Since the verb ποιεῖν is far more attractive with μακρὰν τὴν ἀπόστασιν than with ἐπιμιμεῖσθαι ... ἐθέλειν ἅπαντα, even apart from the fact that the particle γ(ε), instead of a less meaningful δέ, should be maintained if possible, there is a case for making the relationship between both assertions a less straightforward one.

I submit that μακρὰν τὴν ἀπόστασιν ⟨ποιοῦντες⟩ ἐπιμιμεῖσθαι γ' ἐθέλειν ἅπαντα (sc. λέγουσιν) provides the most natural syntax, especially in view of the preceding passage. Without ποιοῦντες, however, the Greek simply does not construe. Unless one decides to assume a shorthand notation which is rudimentary even by the standards of our treatise (to be remotely rivalled only by 5 a 17) and ventures to read Πλάτων δὲ καὶ οἱ Πυθαγόρειοι· μακρὰν τὴν ἀπόστασιν. ἐπιμίμεῖσθαι γ' ἐθέλειν ἅπαντα, there seems to be a case for supposing that ἐπιμιμεῖσθαι involves some corruption, and for trying to emend the text. See the different proposals, above.

With some hesitation I adopt L-M's ἐπεὶ μιμεῖσθαι, in which case Plato and the Pythagoreans themselves are supposed to infer from the (alleged) phenomenon of imitation that there must be a great distance between the objects of imitation and the other things.

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[1] Unlike Aristotle, Th. seems to use οἱ Πυθαγόρειοι with reference to Pythagorizing tendencies within the early Academy in the first place: cp. Philip (1966) 11; Kraemer (1973) 207 (with n. 12). Burkert (1962) 55 speaks of an 'unaristotelian tradition', which Th. would have derived from Speusippus: "Platons Neffe und Nachfolger hat die Grundlagen der platonischen Ideenzahlenlehre als pythagoreisch ausgegeben." (*ibid.* 57).

[2] If the compound would be maintained, it is likely to have a value analogous to that of, e.g., ἐπιτελεῖν: 'go as far as actual μίμησις' (*contra* LSJ s.v.: "imitate further").

The **ἀπόστασις** referred to in all likelihood is that between the valuable and the good (τὸ τίμιον, τὸ ἀγαθόν) and the other things (cp. τὰ δ' 11 a 24).[1] Cp. the use of the word in 'metaphysical' contexts:

Iambl. *Comm. Math.* 16.14 F. τὸ δὲ ἓν οὔτε καλὸν οὔτε ἀγαθὸν ἄξιον καλεῖν, διὰ τὸ καὶ τοῦ καλοῦ καὶ τοῦ ἀγαθοῦ ὑπερανω εἶναι· προϊούσης γὰρ πορρωτέρω ἀπὸ τῶν ἐν ἀρχῇ τῆς φύσεως πρῶτον μὲν τὸ καλὸν ἐφάνη, δεύτερον δὲ καὶ μακροτέραν *ἀπόστασιν* ἐχόντων τῶν στοιχείων τἀγαθόν.

95.22 καὶ ἡ ἀπόστασις δὲ ἀπὸ τοῦ ὄντος ἢ πορρωτέρω ἢ οὖσα ἢ ἐγγὺς παρέξει τὸ διάφορον τοῖς μαθήμασιν.

Ps.-Arist. *De Mundo* 391 a 1-8 πολλάκις μὲν ἔμοιγε θεῖόν τι καὶ δαιμόνιον ὄντως χρῆμα, ὦ Ἀλέξανδρε, ἡ φιλοσοφία ἔδοξεν εἶναι, μάλιστα δὲ ἐν οἷς μόνη διαραμένη πρὸς τὴν τῶν ὅλων θέαν ἐσπούδασε γνῶναι τὴν ἐν αὐτοῖς ἀλήθειαν, καὶ τῶν ἄλλων ταύτης *ἀποστάντων* διὰ τὸ ὕψος καὶ τὸ μέγεθος, αὕτη τὸ πρᾶγμα οὐκ ἔδεισεν οὐδ' αὑτὴν τῶν καλλίστων ἀπηξίωσεν, ἀλλὰ καὶ συγγενεστάτην ἑαυτῇ καὶ μάλιστα πρέπουσαν ἐνόμισεν εἶναι τὴν ἐκείνων μάθησιν. Also 397 b 30-1 διὸ γῇ τε καὶ τὰ ἐπὶ γῆς ἔοικεν, ἐν ἀποστάσει πλείστῃ τῆς ἐκ θεοῦ ὄντα ὠφελείας, quoted *ad* 5 b 13 (p. 225).

For ἀπόστασις "used of the gulf between the Platonic orders of being" R-F (*ad loc.*) refer to

Philop. *In De An.* 77.9-20 κατ' ἀναλογίαν δὲ τούτον καὶ ἐν τοῖς μετὰ τὸ αὐτοζῷον ζῴοις, ἀθανάτοις λέγω καὶ θνητοῖς, εἶναι τὰς ἀρχὰς ταύτας. ὥσπερ γὰρ καὶ ἀριθμοὶ δεκαδικοὶ πάντα, οὕτω καὶ ἐκ μονάδος καὶ δυάδος καὶ τριάδος ⟨καὶ τετράδος⟩· ἀλλὰ τὸ μὲν αὐτοζῷον ἐκ τῆς πρώτης μονάδος καὶ δυάδος καὶ τριάδος καὶ τετράδος, τὰ δὲ ἄλλα τὰ μετὰ τὸ αὐτοζῷον κατὰ ἀναλογίαν τῆς *ἀποστάσεως ἧς ἀφεστήκασιν* ἀπὸ τοῦ αὐτοζῴου, οὕτω καὶ ἀπὸ τῶν ἀρχῶν ἀφεστήκασιν. οὐ γὰρ *τὴν αὐτὴν ἀπόστασιν ἀφεστκήκασιν* ἐκ τοῦ αὐτοζῴου τά τε θεῖα καὶ ἀθάνατα ζῷα καὶ τὰ θνητά. οὐκοῦν τὰ μὲν θεῖά εἰσι καὶ αὐτὰ ἐκ τῆς δευτέρας μονάδος καὶ δευτέρας δυάδος, καὶ ὁμοίως τριάδος καὶ τετράδος, καὶ οὕτως ἀεὶ κατὰ τὴν ἀναλογίαν τῆς *ἀποστάσεως* τοῦ αὐτοζῴου καὶ ἡ ἀπόστασις γίνεται τῶν ἀρχῶν.

Cp. also the following passage, referring to the Pythagorean table of opposites

Philop. *In Phys.* 124.1 ff. ἰστέον γὰρ ὅτι οἱ Πυθαγόρειοι πάντα τὰ ὄντα καὶ πάσας τὰς ἐναντιώσεις εἰς δύο συστοιχίας ἀνῆγον, τήν τε τοῦ ἀγαθοῦ καὶ τὴν τοῦ κακοῦ. ταύταις γὰρ πᾶσαν ἐναντίωσιν ἐμέριζον. τῇ μὲν γὰρ τοῦ ἀγαθοῦ συστοιχίᾳ τὸ κρεῖττον τῶν ἐναντίων ἀπένεμον, τῇ δὲ τοῦ κακοῦ τὸ χεῖρον· οἷον λευκὸν καὶ μέλαν, λογικὸν καὶ ἄλογον, ψυχρὸν καὶ θερμόν,

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[1] As the instance of Speusippus shows, not necessarily coincident with the distance between good and *evil* (REGENBOGEN 1392.59); in the case of the philosophers referred to, presumably coincident with that between the real and the things of nature (R-F); "la distance qui sépare le monde naturel de l'Un-bien", L-M (*ad loc.*).

νεῖκος καὶ φιλίαν, ... (124. 26 ff.) τῷ οὖν ἐξ ἑκατέρας συστοιχίας ὁμοίως ἢ τὰ μερικώτερα λαμβάνειν ἢ τὰ ὁμοίως καθολικώτερα, ταύτῃ λέγονται τὰ αὐτὰ λαμβάνειν· οὐδεὶς γὰρ ἔλαβε, φέρε εἰπεῖν, τὸ μέγα καὶ τὴν σύγκρισιν, ἢ τὴν διάκρισιν καὶ τὸ ψυχρόν (ταῦτα γὰρ οὐχ ὁμοίως τοῦ ἀγαθοῦ καὶ τοῦ κακοῦ *ἀφεστήκασιν*, ἀλλὰ τὸ μὲν μᾶλλον τὸ δὲ ἧττον), ἀλλὰ πάντες τὰ *τὴν αὐτὴν ἀπόστασιν ἀφεστηκότα* τοῦ ἀγαθοῦ καὶ τοῦ κακοῦ ταῦτα λαμβάνουσι. (κ.τ.λ.)

To this extent KRAEMER may be right in stating that "Der Ausdruck ἀπόστασις ... knüpft an den Stufenbau Speusipps an" (1973) 210 n. 22;[1] at the same time the fact that all things (ἅπαντα) are said to desire to imitate <the good> makes it quite clear that the distance between the good/valuable and *all the rest* of the cosmos is at stake.

For the use of ἀπόστασις to denote the distance between one single entity and another, often in statements where the context makes clear that the distance in question is too great, or too small, for some purpose, compare

Arist. *Cael.* 290 a 13-8 ἔτι δὲ πάντα μὲν εὔλογον τὴν αὐτὴν κίνησιν κινεῖσθαι, μόνος δὲ δοκεῖ τῶν ἄστρων ὁ ἥλιος τοῦτο δρᾶν, ἀνατέλλων ἢ δύνων, καὶ οὗτος οὐ δι' αὑτὸν ἀλλὰ διὰ τὴν ἀπόστασιν τῆς ἡμετέρας ὄψεως· ἡ γὰρ ὄψις ἀνατεινομένη μακρὰν ἑλίσσεται διὰ τὴν ἀσθένειαν. (See also 292 a 16.)

Vent. 30 κωλύονται δὲ καὶ οὗτοι καὶ ὅλως πᾶς ἄνεμος πνεῖν ἢ διὰ τὴν ἀπόστασιν, (οὐ γὰρ δύνανται διατείνειν εἰς τὸ πορρωτέρω διὰ τὸ μῆκος) ἢ δι' ἐπιπρόσθησίν τινων, ἢ τρίτον εἴ τι πνεῦμα ἐγχώριον ἀντιπνεῖ καὶ κρατεῖ.

The term here apparently refers to the distance between two provinces of being, one endowed with a value which is lacking in the other.

It should be noted that in view of the infinitive of ἐθέλειν, with the reading of ἐπεὶ ... γ(ε) adopted here, those who advance the suppositious fact that the other entities desire to imitate the good as an indication of the distance between them are Plato and the Pythagoreans themselves.[2] γε expresses that imitation would not make sense if there was no such distance.[3]

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[1] Although it seems unlikely that in the present use of the term, too, different stages of distance are connoted—in which case the distance referred to would be rather that between, e.g., the good and the 'bad' (i.c. the lowest stage of being; shapelessness, matter), than that between the good and the rest of being (as seems to be the case here). The question of the material principle will be posed in the next part of the sentence. This seems to be recognized by KRAEMER too, who after his remark about the term ἀπόστασις cited above adds that "dieser 'vertikalen' Betrachtungsweise sogleich die umfassendere 'horizontale' des Prinzipiengegensatzes gegenübergestellt (wird)" (1973) 210 n. 22.

[2] "l'existence même du désir d'imitation est prise comme un *signe* de la distance qui sépare le monde naturel de l'Un-bien.", L-M *ad loc.*

[3] Therefore, if the assumption that the other entities wish to imitate the good is supposed to involve an advantage as compared to the situation ascribed to Speusippus (where the other

The verb ἐθέλειν[1] is used commonly for a desire that does not, or not only, derive from predilection on the part of the subject[2] (hence often "be prepared", "be willing to"):

Plato *Phaedo* 61 C 8 ἐθελήσει τοίνυν καὶ Εὔηνος καὶ πᾶς ὅτῳ ἀξίως τούτου τοῦ πράγματος μέτεστιν· οὐ μέντοι ἴσως βιάσεται αὑτόν. οὐ γάρ φασι θεμιτὸν εἶναι. ... (D 3) πῶς τοῦτο λέγεις, ὦ Σώκρατες, τὸ μὴ θεμιτὸν εἶναι ἑαυτὸν βιάζεσθαι, ἐθέλειν δ' ἂν τῷ ἀποθνῄσκοντι τὸν φιλόσοφον ἕπεσθαι;

Parm. 133 B 8 (...) εἰ μὴ πολλῶν μὲν τύχοι ἔμπειρος ὢν ὁ ἀμφισβητῶν καὶ μὴ ἀφυής, ἐθέλοι δὲ πάνυ πολλὰ καὶ πόρρωθεν πραγματευομένου τοῦ ἐνδεικνυμένου ἕπεσθαι, ...

Resp. 604 D 5 οὐκοῦν, φαμέν, τὸ μὲν βέλτιστον ("the best in us") τούτῳ τῷ λογισμῷ ἐθέλει ἕπεσθαι.

Ps.-Arist. *MXG* 977 b 35 θέλοι δ' ἂν οὐδεὶς οὕτω (sc. ὡς πρὸς ἄλλο τι) τὸν θεὸν φάναι κράτιστον εἶναι, ἀλλ' ὅτι αὐτὸς ἔχει ὡς οἷόν τε ἄριστα, καὶ οὐδὲν ἐκλείπει καὶ εὖ καὶ καλῶς ἔχειν αὐτῷ.

716.7-12 FHS&G[3] ἔστι γὰρ τὸ γινόμενον κίνημα μελῳδητικὸν περὶ τὴν ψυχὴν σφόδρα ἀκριβές· ὁπόταν φωνῇ ἐθελήσῃ (sc. ἡ ψυχὴ) ἑρμενεύειν αὐτό, τρέπει μὲν τήνδε, τρέπει δ' ἐφ' ὅσον οἷα τ' ἐστὶ τὴν ἄλογον τρέψαι, καθ' ὃ ἐθέλει. ἧς τὴν ἀκρίβειάν τινες ἐπεβάλοντο εἰς τοὺς ἀριθμοὺς ἀναπέμπειν, κατὰ τοὺς ἐν τούτοις λόγους τὴν ἀκρίβειαν τῶν διαστημάτων γίνεσθαι φήσαντες.

CP II.1.1 λόγος δ' ἀμφοῖν ἐστιν οὐχ ὁ αὐτός, ἀλλ' ὁ μὲν οἷον φυσικός, ὁ δὲ ἐπινοητικός, οὔτε γὰρ ἡ φύσις οὐθὲν μάτην, ἥ τε διάνοια βοηθεῖν θέλει τῇ φύσει.

HP IV.11.11 ἴδιος δὲ καὶ ὁ τοξικός ('archer's reed'), ὃν δὴ Κρητικόν τινες καλοῦσιν· ὀλιγογόνατος μὲν σαρκωδέστερος δὲ πάντων καὶ μάλιστα κάμψιν δεχόμενος, καὶ ὅλως ἄγεσθαι δυνάμενος ὡς ἂν θέλῃ τις θερμαινόμενος.[4]

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things were lying inertly on both sides of the valuable), it is not made explicit here—as *would* be the case with a reading of the text without ἐπεί. (So that L-M's emendation of ἐπεὶ ... γε seems to spoil their own case: "Nous comprenons qu'aux yeux de Théophraste l'avantage de la position platonico-pythagoricienne est de combiner le désir d'imitation avec l'existence d'une opposition fondamentale.", *ad* 11 b 2-3.)

[1] Since θέλειν seems to be used especially to avoid hiatus, which in this case is more easily avoided by elision of γε, the reading ἐπιμιμεῖσθαι γ' ἐθέλειν seems to be preferable to ἐπιμιμεῖσθαι γε θέλειν (for which see above).

[2] So viewed, a use like the followong seems to be somewhat problematic: *HP* I.4.3 οὐ μὴν ἀλλὰ καὶ τούτων εἴ τις ἀκριβολογεῖσθαι θέλοι τὰ μὲν ἂν εὕροι κοινὰ (...); Th. goes on to say that in these matters ἀκριβολογία is out of place. Here the use of θέλειν is apparently connected with the positive connotations adhering to ἀκριβολογεῖσθαι generally; cp. such phrases as εἴ τις ἐθέλει κατανοεῖν (*HP* VII.10.2).

[3] Punctuation modified.

[4] Presumably not "may be turned about as one pleases" (tr. Hort), but rather "as one wishes", sc. for some use; cp. ἕκαστος γὰρ πρὸς ἕκαστα χρήσιμος at the end of the preceding paragraph (IV.11.10).

In the case of natural (animate as well as inanimate) objects, ἐθέλειν often expresses the expectations we derive from observation of the proceedings of nature;[1] e.g.

CP VI.4.4 ἀεὶ γὰρ ἡ φύσις ἐξομοιοῦν ἐθέλει τῷ ὑποκειμένῳ, καὶ τοῦτο καὶ ἐν τοῖς ζῴοις καὶ ἐν τοῖς φυτοῖς· ποιεῖται γάρ,[2] καὶ τροφὴ γίνεται πᾶσιν, ὅταν κρατῇ τὸ λαμβανόμενον.
HP II.1.3 οὐ μὴν ἀλλὰ καὶ ἄνευ τούτου θέλει βλαστάνειν καὶ ῥόα καὶ μηλέα ἐαρινή· βλαστάνει δὲ καὶ ἀμυγδαλῆ φυτευομένη.
381 FHS&G (= Athen. *Deipn.* 9.46 391 E) ὁ δὲ Θεόφραστος τοὺς ἀγρίους (sc. ἀλεκτρύονας) φησὶν ὀχευτικωτέρους εἶναι τῶν ἡμέρων. λέγει δὲ καὶ ἄρρενας εὐθὺς ἐξ εὐνῆς ἐθέλειν πλησιάζειν, τὰς δὲ θηλείας προβαινούσης μᾶλλον τῆς ἡμέρας.

In the negative:

HP II.2.10 εὔλογον δὲ ἀμφότερα συμβαίνειν κατὰ τὰς ἐναντιώσεις, εἴπερ μηδ' ὅλως ἔνια φύεσθαι θέλει ("considering that some things entirely refuse to grow") μεταβάλλοντα τούς τόπους.
CP I.3.2 δάφνην δὲ ἀδύνατον (sc. to grow from branch cuttings), ἐπεὶ οὐδὲ ἀπὸ παρασπάδος (from a detached sucker) θέλει ῥᾳδίως.
[Th.] *Sign.* 42 γῆς ἔντερα πολλὰ φαινόμενα χειμῶνα σημαίνει. καὶ ἐὰν πῦρ μὴ θέλῃ ἅπτεσθαι, χειμέριον· καὶ ἐὰν λύχνος ἅπτεσθαι μὴ ἐθέλῃ, χειμῶνα σημαίνει· ...

And especially

CP III.10.4 καὶ ὅσα προσφιλῆ τυγχάνει, καθάπερ δοκεῖ τῶν δένδρων ἐλάα καὶ μύρρινος· τάς τε γὰρ ῥίζας συμπλέκεσθαί φησι τῶν δένδρων 'Ανδροτίων, καὶ τὰς τοῦ μυρρίνου ῥάβδους φύεσθαι διὰ τῶν ἀκρεμόνων τῆς ἐλάας, τόν τε καρπόν, ἔχοντα τοῦ ἡλίου καὶ τῶν ἀνέμων προβολὴν τὴν ἐλάαν, ἁπαλὸν γίνεσθαι καὶ γλυκύν, ἐλάττω δὲ τοῦ ἐν τοῖς προσείλοις. ἄλλο δ' οὐδὲν ἐθέλει φυτεύεσθαι πρὸς ταῖς ἐλαίαις.[3] εὐμενὲς δὲ καὶ ἡ πεύκη δοκεῖ πᾶσιν εἶναι.

Where imitation of the good is concerned, then, the use of (ἐ)θέλειν seems to be only natural—this in contrast, one might feel, to the notion of ὄρεξις, whether (1) insofar as the wish to imitation is presented as a reasonable one rather than as being a mere 'desire', or (2) in sofar as it expresses a natural tendency inherent in the nature of things: in the manner of ἔφεσις rather than of ὄρεξις, as it were; cp. *ad* 5 a 15 and 5 a 24.

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[1] "idem fere ac πεφυκέναι" BONITZ s.v. 216 b 7.
[2] "the creature is being made", tr. EINARSON/LINK.
[3] "But nothing else cares to be planted next to the olive" tr. EINARSON/LINK.

As far as Plato is concerned, the reference may be to the χωρισμός between the Ideas and the things of nature—the notion of μέθεξις being blended with that of μίμησις featuring in the creation myth of the *Timaeus*;[1] this seems to be consistent with Th.' comparatively positive report of Plato (6 b 11 ff. above), where he was given credit for linking up other things (τῶν ἄλλων) with the Ideas, and these again with the ἀρχαί. As argued above, here we are probably not supposed to make a further distinction between distances as Philoponus does *In De An.* (quoted above) where various distances between the entities and the ἀρχαί are distinguished.

And as SKEMP (1979) 236 points out, "perhaps a doctrine held by [Platonists] of ἔφεσις of the Great-and-Small for the One can be deduced from *Phys.* I.9":

> Arist. *Phys.* 192 a 13-25 ἡ μὲν γὰρ ὑπομένουσα συναιτία τῇ μορφῇ τῶν γιγνομένων ἐστίν, ὥσπερ μήτηρ· ἡ δ' ἑτέρα μοῖρα τῆς ἐναντιώσεως πολλάκις ἂν φαντασθείη τῷ πρὸς τὸ κακοποιὸν αὐτῆς ἀτενίζοντι τὴν διάνοιαν οὐδ' εἶναι τὸ παράπαν· ὄντος γάρ τινος θείου καὶ ἀγαθοῦ καὶ ἐφετοῦ, τὸ μὲν ἐναντίον αὐτῷ φαμεν εἶναι, τὸ δὲ ὃ πέφυκεν ἐφίεσθαι καὶ ὀρέγεσθαι αὐτοῦ κατὰ τὴν αὐτοῦ φύσιν. τοῖς δὲ (i.e. οἱ τὸ μὴ ὂν τὸ μέγα καὶ μίκρον (sc. φασι εἶναι)) συμβαίνει τὸ ἐναντίον ὀρέγεσθαι τῆς αὐτοῦ φθορᾶς. καίτοι οὔτε αὐτὸ αὑτοῦ οἷόν τε ἐφίεσθαι τὸ εἶδος, διὰ τὸ μὴ εἶναι ἐνδεές, οὔτε τὸ ἐναντίον (φθαρτικὰ γὰρ ἀλλήλων τὰ ἐναντία), ἀλλὰ τοῦτ' ἔστιν ἡ ὕλη—ὥσπερ ἂν εἰ θῆλυ ἄρρενος καὶ αἰσχρὸν καλοῦ· πλὴν οὐ καθ' αὑτὸ αἰσχρόν, ἀλλὰ κατὰ συμβεβηκός, οὐδὲ θῆλυ, ἀλλὰ κατὰ συμβεβηκός.

As to the Pythagoreans, Th. apparently follows Aristotle in supposing that according to them things imitate numbers. The assertion that a great distance is involved adds to the apparent contradiction inherent in this idea, that while things are thought to imitate numbers, they are held at the same time to *be* numbers.[2]

11 b 2-7 καίτοι ... ἐναντίας.

ὅλως R-F; ὅλως P; ὅλως δ' JCLA; ὡς USENER (1890).

καίτοι expresses the contrast between (a) the apparent implication inherent in the statement that there is a great distance between the good and the other

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[1] 48 E 5 - 49 A 6: ἓν μὲν ὡς παραδείγματος εἶδος ὑποτεθέν, νοητὸν καὶ ἀεὶ κατὰ ταὐτὰ ὄν, μίμημα δὲ παραδείγματος δεύτερον, γένεσιν ἔχον καὶ ὁρατόν. τρίτον δὲ ... (ὑποληπτέον) πάσης εἶναι γενέσεως ὑποδοχὴν αὐτὴν οἷον τιθήνην.

[2] For this notorious difficulty in Aristotle's conception of the Pythagorean point of view, see e.g. PHILIP (1966) 73 f.

things which was referred to in what precedes (11 a 26 – b 1), its more metaphysical implications being expressed here in καθάπερ ἀντίθεσίν τινὰ ποιοῦσιν κ.τ.λ., viz. to the effect that the other entities are far removed from the good, and (b) the fact that, according to this theory, these other entities are equally essential to the whole (11 b 5-7).

ποιοῦσιν, which is apparently the dative case of the participle,[1] somewhat loosely connects with οὐχ οἷόν τε in 11 b 5 ("for them, ... it is impossible that ..."). On the one hand, Plato and the Pythagoreans make up what may be called an opposition of some sort between the One and the indefinite dyad. **καθάπερ** (ἀντίθεσιν) yields an adverbial adjunct rather than a full-fledged subordinate clause, pointing towards a certain looseness of terminology, here again not so much because the term does not apply in the strict sense, but rather because no further specification is given.[2] **ἀντίθεσις**, like ἐναντίωσις, may be used for the relation between any pair of ἐναντία, for any kind of opposition or contrast:

CP II.4.9-10 ὡς δ' ἁπλῶς εἰπεῖν ἡ μέσην ἔχουσα τῶν ἐναντίων κρᾶσιν ⟨ἀραιοῦ καὶ⟩ πυκνοῦ καὶ ξηροῦ καὶ ὑγροῦ καὶ κούφου καὶ βαρέος, ἔτι δὲ τὰ ἄνω πρὸς τὰ κάτω σύμμετρα τούτοις, πασῶν ἀρίστη πρὸς ἅπαντα (ὡς εἰπεῖν) δένδρα τε καὶ σπέρματα, φαίνεται γὰρ ὁμοίαν τινὰ ἔχειν τῷ ἔαρι πρὸς τὰς ἄλλας ὥρας. οὐ μὴν ἀλλ' αὐτῶν γε τούτων ἡ πρὸς θάτερον μέρος ἀποκλίνουσα *τῆς ἐναντιώσεως* κρείττων, ἣν δὴ καὶ ἁπλῶς τίθενταί τινες ἀρίστην, οἷον τὴν κούφην καὶ μανὴν καὶ ἔνικμον, ἔχει τε γὰρ τροφὴν ἐν ἑαυτῇ καὶ εὐδίοδός ἐστι ταῖς ῥίζαις· ἡ δὲ πυκνὴ καὶ βαρεῖα καὶ ξηρὰ δῆλον ὡς ἐναντία. (10) κατὰ δὲ τὰς παραλλαγὰς *τῶν ἀντιθέσεων*, καὶ τὰς πρὸς ἕκαστον ἔξουσιν ἤδη διαφοράς· οἷον ἐὰν ᾖ μανὴ μὲν καὶ λεπτή, βαθύγεως δὲ καὶ ξηρὰ καὶ ἄϋδρος, ...

Plato *Soph.* 257 D 7 ἔστι τῷ καλῷ τι θατέρου μόριον *ἀντιτιθέμενον*; ... (E 2 ff.) ἄλλο τι τῶν ὄντων τινὸς ἑνὸς γένους ἀφορισθὲν καὶ πρός τι τῶν ὄντων αὖ πάλιν ἀντιτεθὲν οὕτω συμβέβηκεν εἶναι τὸ μὴ καλόν; [ ] οὕτως. [ ] ὄντος δὴ πρὸς ὂν *ἀντίθεσις*, ὡς ἔοικ', εἶναί τις συμβαίνει τὸ μὴ καλόν.

258 A 11 – B 3 οὐκοῦν, ὡς ἔοικεν, ἡ τῆς θατέρου μορίου φύσεως καὶ τῆς τοῦ ὄντος πρὸς ἄλληλα ἀντικειμένων *ἀντίθεσις* οὐδὲν ἧττον, εἰ θέμις εἰπεῖν, αὐτοῦ τοῦ ὄντος οὐσία ἐστίν, οὐκ ἐναντίον ἐκείνῳ σημαίνουσα ἀλλὰ τοσοῦτον μόνον, ἕτερον ἐκείνου.

Cp. also

Arist. *Met.* 1087 b 26-8 οἱ δὲ τὸ ἕτερον καὶ τὸ ἄλλο πρὸς τὸ ἓν ἀντιτιθέασιν, οἱ δὲ πλῆθος καὶ τὸ ἕν. εἰ δέ ἐστιν, ὥσπερ βούλονται, τὰ ὄντα ἐξ ἐναντίων, κ.τ.λ.

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[1] Cp. the similar construction in 10 b 25. Differently L-M, who read ὅλως δ' in 11 b 5 and coordinate ἀντίθεσίν ... ποιοῦσιν and οὐχ οἷόν τε ... δύνασθαι.

[2] Cp. 4 b 3 καθάπερ ζωὴν καὶ κίνησιν.

An explanation of this vagueness of expression is proposed *ad* ᾗ καὶ τὰς ἀρχὰς ἐναντίας, below.

For the use of the double genitive with ἀντίθεσις (**τῆς ἀορίστου δυάδος καὶ τοῦ ἑνός**, "(an opposition) between the indefinite dyad and the One") cp. *Vert.* 11 ποιεῖ δὲ καὶ ἄλλη τις ἐναντίωσις ὡς δοκεῖ, οἷον ἡ τῆς ἐνδείας καὶ τῆς πληρώσεως. In contrast to the usual order, here the indefinite dyad, whose function in the cosmos is at issue in particular (and which will be referred to by ᾗ in 11 b 7 as well), comes first.

For this set of principles (presumably also referred to by τὰς ἀρχάς in 6 b 14) see *ad* 6 a 24-5—where however the expression οἱ τὸ ἓν καὶ τὴν ἀόριστον δυάδα ποιοῦντες apparently refers to the Pythagoreans, but does not include Plato. On whether the concept of the indefinite dyad can be ascribed to Plato himself, and for the relevant testimonia see Robin (1908) 635 ff.

ἐν ᾗ (sc. δυάδῃ) "on which depends", sc. as a principle: see 6 a 28 – b 1: ὅτι τὰ μὲν ἀπὸ τῆς ἀορίστου δυάδος, οἷον τόπος καὶ κενὸν καὶ ἄπειρον; the clause as a whole establishes the link with μακρὰν τὴν ἀπόστασιν, ἐπεὶ μιμεῖσθαί γ' ἐθέλειν ἅπαντα, by making explicit the characteristics of ἅπαντα (which represents what is contrary to the good).[1]

τὸ ἄπειρον καὶ τὸ ἄτακτον ("the unlimited and the unordered") represent what is commonly considered less valuable in the cosmos; these terms possibly represent quantitative and qualitative indeterminateness, i.e. lack of completeness and lack of regularity[2] respectively. **ἀμορφία** is used as the generic term (**καὶ πᾶσα**), which is meant to single out (**καθ' αὑτήν**) the char-

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[1] It should be noted that Th. here does not explicitly ascribe to Plato and the Pythagoreans the idea that the indefinite dyad represents the evil in the cosmos—he is only saying that (1) according to these philosophers all things want to imitate the good, (2) that they somehow oppose the indefinite dyad with the One—which, in view of καίτοι, is apparently somehow associated with the good, and (3) that they accordingly postulate as principles a pair of opposites.

While the present context suggests that the indefinite dyad, which is the principle of all indeterminateness in the cosmos, is essential to the cosmos as such *and thus cannot be evil in any disqualifying sense* (cp. 11 a 18 ff.), the passage is not necessarily informative about the question whether the indeterminate was identified with the evil by Plato and the Pythagoreans themselves.

For the idea of matter/the indefinite dyad conceived as the evil by Plato and the Pythagoreans see Hager (1962) 76, who argues that this doctrine may be ascribed to Plato in view of *Polit.* 273 B 6 f. (παρὰ μὲν γὰρ τοῦ συνθέντος πάντα καλὰ κέκτηται) and *Tim.* 53 B 5 f. (τὸ δὲ ᾗ δυνατὸν ὡς κάλλιστα ἄριστά τε ἐξ οὐχ οὕτως ἐχόντων); for the Pythogareans, Hager (*l.c.*) refers to a neo-Pythagorean source which ascribes the doctrine to Pythagoras himself: *Doxogr. Gr.* 302 a 6-10 (*Placit.* I.I.7.18) Πυθαγόρας τῶν ἀρχῶν τὴν μονάδα θεὸν καὶ τἀγαθόν, ἥτις ἐστὶν ἡ τοῦ ἑνὸς φύσις, αὐτὸς ὁ νοῦς· τὴν δ' ἀόριστον δυάδα δαίμονα καὶ τὸ κακόν, περὶ ἥν ἐστι τὸ ὑλικὸν πλῆθος.

[2] See *ad* 4 a 4.

acteristic property shared by all such things as the 'unlimited' and the 'unordered' individually. So here ἀμορφία seems to be conceived in the most general sense,[1] taking the place, as it were, of ἀοριστία (cp. 11 a 20), which term may have been avoided here in view of the technical expression of ἡ ἀόριστος δυάς in what precedes.

In fact, **ὡς εἰπεῖν** may convey that ἀμορφία is not the *verbum proprium* in this case; on the other hand, in view of the idiomatic use of ὡς εἰπεῖν to qualify the accuracy of quantitative expressions[2] the addition might merely indicate that we are not expected to complete the series exemplified by τὸ ἄπειρον καὶ τὸ ἄτακτον. (Or, to put it differently, in that case ὡς εἰπεῖν would indicate that πᾶσα does not pretend to completeness but merely points out that ἀμορφία is meant to cover any phenomenon characterized by the lack of some boundary.)

As an implication of their reducing all shapelessness in the cosmos to the indefinite dyad, which is one of a pair of opposites, for Plato and the Pythagoreans the universe cannot possibly (**ὅλως**)[3] exist without it.

Since the interpretation of καίτοι ... ἀντίθεσίν τινα ποιοῦσιν as a main clause seems to be less likely (see the beginning of this note), the reading ὅλως δ(έ) should be rejected; this reading might be explained as "an attempt to emend a construction which was not understood through failure to notice the idiomatic use of the participle ποιοῦσιν" (R-F *ad loc.*)—a failure the more pardonable as, in contrast to the situation in 10 b 25, ποιοῦσιν precedes the word responsible for the dative case.

ταύτης refers, grammatically speaking, to ἡ ἀόριστος δυάς rather than to ἀμορφία: owing to their nature as members of an opposition, the existence of the cosmos essentially requires, as a complement to the One, the indefinite dyad.

For Plato and the Pythagoreans, then, the nature of the whole (for **τὴν τοῦ ὅλου φύσιν** cp. τὴν τοῦ παντὸς φύσιν 8 b 8) cannot possibly exist without the indefinite dyad; on the contrary, Th. adds, the dyad should have an equal share with, or even exceed its counterpart (**τῆς ἑτέρας** sc. ἀρχῆς). The modality of the phrase derives from οὐχ οἷόν τε in 11 b 5. That the indefinite dyad, the referent of ταύτης, now appears as the grammatical subject (**ἰσομοιρεῖν** sc. τὴν ἀόριστον δυάδα) is of course quite natural, considering that the dyad is the main issue of the passage as such.

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[1] Contrast Arist. *Phys.* 190 b 14-7 λέγω ... τὴν μὲν ἀσχημοσύνην καὶ τὴν ἀμορφίαν καὶ τὴν ἀταξίαν τὸ ἀντικείμενον, τὸν δὲ χαλκὸν ἢ τὸν λίθον ἢ τὸν χρυσὸν τὸ ὑποκείμενον.

[2] See *ad* 7 a 16 and 19, p. 307 above.

[3] For ὅλως + negation see *ad* 4 a 20, p. 104.

ἰσομοιρία is said of elements having an equal share in the totality of being in

Ps.-Arist. *De Mundo* 396 b 23-397 a 5 οὕτως οὖν καὶ τὴν τῶν ὅλων σύστασιν, οὐρανοῦ λέγω καὶ γῆς τοῦ τε σύμπαντος κόσμου, διὰ τῆς τῶν ἐναντιωτάτων ἀρχῶν κράσεως μία διεκόσμησεν ἁρμονία· ξηρὸν γὰρ ὑγρῷ, θερμὸν δὲ ψυχρῷ βαρεῖ τε κοῦφον μιγέν, καὶ ὀρθὸν περιφερεῖ, γῆν τε πᾶσαν καὶ θάλασσαν αἰθέρα τε καὶ ἥλιον καὶ σελήνην καὶ τὸν ὅλον οὐρανὸν διεκόσμησε μία ἡ διὰ πάντων διήκουσα δύναμις, ἐκ τῶν ἀμίκτων καὶ ἑτεροίων, ἀέρος τε καὶ γῆς καὶ πυρὸς καὶ ὕδατος, τὸν σύμπαντα κόσμον δημιουργήσασα καὶ μιᾷ διαλαβοῦσα σφαίρας ἐπιφανείᾳ, τάς τε ἐναντιωτάτας ἐν αὐτῷ φύσεις ἀλλήλαις ἀναγκάσασα ὁμολογῆσαι, καὶ ἐκ τούτων μηχανησαμένη τῷ παντὶ σωτηρίαν. αἰτία δὲ ταύτης μὲν ἡ τῶν στοιχείων ὁμολογία, τῆς δὲ ὁμολογίας *ἡ ἰσομοιρία* καὶ τὸ μηδὲν αὐτῶν πλέον ἕτερον ἑτέρου δύνασθαι· τὴν γὰρ ἴσην ἀντίστασιν ἔχει τὰ βαρέα πρὸς τὰ κοῦφα καὶ τὰ θερμὰ πρὸς τὰ θάτερα, τῆς φύσεως ἐπὶ τῶν μειζόνων διδασκούσης ὅτι τὸ ἴσον σωστικόν πώς ἐστιν ἁρμονίας, ἡ δὲ ὁμόνοια τοῦ πάντων γενετῆρος καὶ περικαλλεστάτου κόσμου.

The term, like κοινωνία in 4 a 10, is at home in social/political contexts especially (οἷον too is used similarly in both passages: see p. 87 above): e.g.

Thuc. VI.39 φήσει τις δημοκρατίαν οὔτε ξυνετὸν οὔτ' ἴσον εἶναι, τοὺς δὲ ἔχοντας τὰ χρήματα καὶ ἄρχειν ἄριστα βελτίστους. ἐγὼ δέ φημι πρῶτα μὲν δῆμον ξύμπαν ὠνομάσθαι, ὀλιγαρχίαν δὲ μέρος, ἔπειτα φύλακας μὲν ἀρίστους εἶναι χρημάτων τοὺς πλουσίους, βουλεῦσαι δ' ἂν βέλτιστα τοὺς ξυνετούς, κρῖναι δ' ἂν ἀκούσαντας ἄριστα τοὺς πολλούς, καὶ ταῦτα ὁμοίως καὶ κατὰ μέρη καὶ ξύμπαντα ἐν δημοκρατίᾳ *ἰσομοιρεῖν*;[1]

Isocr. V.39 τάχ' οὖν ἄν τις ἐνστῆναι τοῖς εἰρημένοις τολμήσειε, λέγων ὡς ἐπιχειρῶ σε πείθειν ἀδυνάτοις ἐπιτίθεσθαι πράγμασιν· οὔτε γὰρ Ἀργείους φίλους ἄν ποτε γενέσθαι Λακεδαιμονίοις οὔτε Λακεδαιμονίους Θηβαίοις, οὔθ' ὅλως τοὺς εἰθισμένους ἅπαντα τὸν χρόνον πλεονεκτεῖν οὐδέποτ' ἂν ἰσομοιρῆσαι πρὸς ἀλλήλους.

ἢ καὶ ὑπερέχειν presents an alternative (even more problematic to those who identify indeterminateness with evil): the indefinite dyad may even exceed (in power, sphere of influence) the other principle (cp. μᾶλλον δὲ πολλῷ πλεῖον 11 a 15-6).[2] Possibly this verb, too, has social/political connotations; see e.g.

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[1] "'sie haben einen gleichen Anteil', nämlich an den Pflichten wie an den Vorteilen des öffentlichen Lebens", Classen/Steup *ad loc.*

[2] It should be noted that the addition of ἢ καὶ ὑπερέχειν is somewhat embarrassing to those who argue that Plato and the Pythagoreans represent the middle position of a merely 'dialectical' argument on the part of Th., the thesis being that evil/order surpasses the good/order in the cosmos, the antithess being that the good/order surpasses evil/disorder in the cosmos: the middle position, then would be that evil/disorder would equal (*or surpass*) the good/order in the cosmos ("ma, si noti, l'accento è posto più sull' ἰσομοιρεῖν che non sull' ὑπερέχειν", Reale *ad loc.*).

Arist. *Pol.* 1304 a 38 – b 4 κινοῦνται δ' αἱ πολιτεῖαι καὶ ὅταν τἀναντία εἶναι δοκοῦντα μέρη τῆς πόλεως ἰσάζῃ ἀλλήλοις, οἷον οἱ πλούσιοι καὶ ὁ δῆμος, μέσον δ' ᾖ μηθὲν ἢ μικρὸν πάμπαν· ἂν γὰρ πολὺ ὑπερέχῃ ὁποτερονοῦν τῶν μερῶν, πρὸς τὸ φανερῶς κρεῖττον τὸ λοιπὸν οὐ θέλει κινδυνεύειν.

1338 b 24-7 ἔτι δ' αὐτοὺς τοὺς Λάκωνας ἴσμεν, ἕως μὲν αὐτοὶ προσήδρευον ταῖς φιλοπονίαις, ὑπερέχοντας τῶν ἄλλων, νῦν δὲ κἀν τοῖς γυμνικοῖς ἀγῶσι κἀν τοῖς πολεμικοῖς λειπομένους ἑτέρων· ...

ᾗ καί is Ross' emendation for ἢ καί: see *ad* 9 b 1, pp. 444-5 above. In view of the fact that the indefinite dyad, which according to Plato and the Pythagoreans is opposed to the One, is responsible for all indefiniteness in the cosmos, they take the philosophically significant position of making the principles contrary to each other (**τὰς ἀρχὰς ἐναντίας** sc. ποιοῦσιν). Compare

Arist. *Met.* 1087 a 29 ff. (...) πάντες δὲ ποιοῦσι τὰς ἀρχὰς ἐναντίας, ὥσπερ ἐν τοῖς φυσικοῖς, καὶ περὶ τὰς ἀκινήτους οὐσίας ὁμοίως. ... (b 5 ff.) οἱ δὲ (the Platonists) τὸ ἕτερον τῶν ἐναντίων ὕλην ποιοῦσιν, οἱ μὲν τῷ ἑνὶ τὸ ἄνισον, ὡς τοῦτο τὴν τοῦ πλήθους οὖσαν φύσιν, οἱ δὲ τῷ ἑνὶ τὸ πλῆθος (γεννῶνται γὰρ οἱ ἀριθμοὶ τοῖς μὲν ἐκ τοῦ ἀνίσου δυάδος, τοῦ μεγάλου καὶ μικροῦ, τῷ δ' ἐκ τοῦ πλῆθος, ὑπὸ τῆς τοῦ ἑνὸς δὲ οὐσίας ἀμφοῖν) καὶ γὰρ ὁ τὸ ἄνισον καὶ ἓν λέγων τὰ στοιχεῖα, τὸ δ' ἄνισον ἐκ μεγάλου καὶ μικροῦ δυάδα, ὡς ἓν ὄντα τὸ ἄνισον καὶ τὸ μέγα καὶ τὸ μικρὸν λέγει, καὶ οὐ διορίζει ὅτι λόγῳ ἀριθμῷ δ' οὔ.

It may be noted that Aristotle himself does not subscribe to this opinion:

Met. 1087 a 31 – b 4 (...) εἰ δὲ τῆς τῶν ἁπάντων ἀρχῆς μὴ ἐνδέχεται πρότερόν τι εἶναι, ἀδύνατον ἂν εἴη τὴν ἀρχὴν ἕτερόν τι οὖσαν εἶναι ἀρχήν, οἷον εἴ τις λέγοι τὸ λευκὸν ἀρχὴν εἶναι οὐχ ᾗ ἕτερον ἀλλ' ᾗ λευκόν, εἶναι μέντοι καθ' ὑποκειμένου καὶ ἕτερόν τι ὂν λευκὸν εἶναι· ἐκεῖνο γὰρ πρότερον ἔσται. ἀλλὰ μὴν γίγνεται πάντα ἐξ ἐναντίων ὡς ὑποκειμένου τινός· ἀνάγκη ἄρα μάλιστα τοῖς ἐναντίοις τοῦθ' ὑπάρχειν. ἀεὶ ἄρα πάντα τὰ ἐναντία καθ' ὑποκειμένου καὶ οὐθὲν χωριστόν· ἀλλ' οὐθὲν οὐσίᾳ ἐναντίον ὥσπερ καὶ φαίνεται, καὶ ὁ λόγος μαρτύρει, *οὔθεν ἄρα τῶν ἐναντίων κυρίως ἀρχὴ πάντων ἀλλ' ἑτέρα.*

For Th.' ideas on the subject, see Ch. VIII above; cp. 11 b 11-2 below.

11 b 7-12 διὸ καὶ ... οὖσαν.

Since the cosmos as a whole essentially depends on the presence of the one principle as well as the other (**διὸ καί**: see *ad* 9 b 15), even God (for those who ascribe the ultimate cause to God)[1] is not considered to be capable to

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[1] For ἀνάπτουσιν see *ad* 6 b 13, p. 273 above.

lead *all things* to the best. (**τὴν αἰτίαν** obviously refers to the cause of the universe as a whole.)

Both the choice of the pronoun and the position of the relative clause **ὅσοι ... ἀνάπτουσιν** suggest that a limitation with regard to an implicit, more comprehensive referent is involved; presumably, in view of the continued use of the infinitive construction (τὸν θεόν ... δύνασθαι), still 'Plato and the Pythagoreans'. One might compare

> 230.7-10 FHS&G (= Simpl. *In Phys.* 1.2 184 b 15) (Πλάτων ἐν τῇ περὶ φύσεως ἱστορίᾳ) δύο τὰς ἀρχὰς βούλεται ποιεῖν, τὸ μὲν ὑποκείμενον ὡς ὕλην ὃ προσαγορεύει 'πανδεχές', τὸ δ' ὡς αἴτιον καὶ κινοῦν ὃ περιάπτει τῇ τοῦ θεοῦ καὶ τῇ τοῦ ἀγαθοῦ δυνάμει.

Since both order and disorder, based on the principles of the One and the indefinite dyad, are essential for the cosmos, even God (**οὐδὲ τὸν θεόν**), they say (or the relevant ones among them), is not able to lead all things (**πάντ'**) towards the best. Rather, assuming that God does lead things towards the best (**ἀλλ' εἴπερ**, see *ad* 7 b 13, p. 336), he does so only as far as possible (**ἐφ' ὅσον ἐνδέχεται**). Here again, therefore, it is assumed that the power which instigates the final causation is not able to accomplish its aim altogether: cp., with reference to Peripatetic conceptions, τὴν φύσιν ἐν ἅπασιν ὀρέγεσθαι τοῦ ἀρίστου καὶ *ἐφ' ὧν ἐνδέχεται* μεταδιδόναι τοῦ ἀεὶ καὶ τοῦ τεταγμένου, 11 a 5-7.

It has been observed that Th. may be thinking of the activities of the Demiurge described in *Tim.* 29 ff.,[1] where the Demiurge is said, on the one hand, to include all things in his ambitions (βουλήθεις γὰρ ὁ θεὸς ἀγαθὰ μὲν πάντα, 30 A 2; cp. also 29 E 3), while on the other hand his ambition apparently cannot be fulfilled: see especially ὅτι μάλιστα (παραπλήσια ἑαυτῷ) 29 E 3, (ὅπως) ὅτι κάλλιστον (εἴη κατὰ φύσιν) ἄριστόν τε (ἔργον ἀπειργασμένος) 30 B 5-6.

Of his own accord Th. adds that perhaps (**τάχα δ'**) God would not *choose* to lead all things towards the best even if he could; **προαιρεῖσθαι** expresses deliberate choice of that which is within our power: see

> Arist. *EN* 1113 a 2-10 βουλευτὸν δὲ καὶ προαιρετὸν τὸ αὐτό, πλὴν ἀφωρισμένον ἤδη τὸ προαιρετόν· τὸ γὰρ ἐκ τῆς βουλῆς κριθὲν προαιρετόν ἐστιν. παύεται γὰρ ἕκαστος ζητῶν πῶς πράξει, ὅταν εἰς αὐτὸν ἀναγάγῃ τὴν ἀρχήν, καὶ αὐτοῦ εἰς τὸ ἡγούμενον· τοῦτο γὰρ τὸ προαιρούμενον. δῆλον δὲ τοῦτο καὶ ἐκ τῶν ἀρχαίων πολιτειῶν, ἃς Ὅμηρος ἐμιμεῖτο· οἱ γὰρ βασιλεῖς ἃ προείλοντο ἀνήγγελλον τῷ δήμῳ. ὄντος δὲ τοῦ προαιρετοῦ βουλευτοῦ ὀρεκτοῦ

[1] Cp. Reale (*ad loc.*).

τῶν ἐφ' ἡμῖν, καὶ *ἡ προαίρεσις ἂν εἴη βουλευτικὴ ὄρεξις τῶν ἐφ' ἡμῖν·* ... (Cp. also 1111 b 20-1: προαίρεσις μὲν γὰρ οὐκ ἔστι τῶν ἀδυνάτων.)

Th., then, adds that God might not even choose to do so (**οὐδ' ἂν προέλοιτ(ο)**), if indeed (**εἴπερ**) the result will be that being is destroyed.

For **συμβήσεται** of what will be the case under certain conditions cp. *Od.* 52 συμβαίνειν δὲ τοῦτο (sc. beneficial effects) καὶ κατὰ τὰς τῶν οἴνων μίξεις);[1] as was said *ad* 5 b 23-6, the verb connotes isolated, unsystematized, occurrence (hence often of what happens 'by chance')—not inappropriate to indicate an unintended and, one might add, unwelcome effect in the future.

Word order (**ἀναιρεῖσθαι ... τὴν ὅλην οὐσίαν**) seems to emphasize the result to be feared:[2] for the use of ἀναιρεῖσθαι in a similar context, with regard to the destruction of an organic whole, see

Arist. *Pol.* 1253 a 18-22 καὶ πρότερον δὲ τῇ φύσει πόλις ἢ οἰκία καὶ ἕκαστος ἡμῶν ἐστιν. τὸ γὰρ ὅλον πρότερον ἀναγκαῖον εἶναι τοῦ μέρους· ἀναιρουμένου γὰρ τοῦ ὅλου οὐκ ἔσται ποὺς οὐδὲ χείρ, εἰ μὴ ὁμωνύμως, ...

(In our passage, one might say, the reverse situation applies.)

The destruction of the cosmos, then, would follow from the nature of the universe itself, which essentially depends on contraries: the cosmos 'comes from' contraries (**ἐξ ἐναντίων**);[3] for the use of ἐκ compare οἷον γὰρ ἐξ ἀντικειμένων τὴν ἅπασαν οὐσίαν 7 a 9-10; Arist. *Met.* 1087 a 36-7 ἀλλὰ μὴν γίγνεται πάντα ἐξ ἐναντίων ὡς ὑποκειμένου τινός. Also

Arist. *Phys.* 188 a 26-9 ὅτι μὲν οὖν τἀναντία πως πάντες ποιοῦσι τὰς ἀρχάς, δῆλον. καὶ τοῦτο εὐλόγως· δεῖ γὰρ τὰς ἀρχὰς μήτε ἐξ ἀλλήλων εἶναι μήτε ἐξ ἄλλων, καὶ *ἐκ τούτων πάντα·* τοῖς δὲ ἐναντίοις τοῖς πρώτοις ὑπάρχει ταῦτα, ... (See also *ad* 11 b 7 above.)

It also consists in contraries[4] (**<ἐν> ἐναντίοις**).[5] The addition of ἐν seems to be necessary; see τί δή ποτε ἡ φύσις καὶ ἡ ὅλη δ' οὐσία τοῦ παντὸς ἐν ἐναντίοις ἐστίν 8 a 22-3 with pp. 377-9. For the mechanism implied cp. αἴτιά τε μᾶλλον τὰ πρότερον τῶν ὑστέρων· ἐκείνων γὰρ ἀναιρουμένων ἀν-

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[1] "This result also follows, it is said, from the mixture of different wines" tr. HORT.

[2] Cp. *Vent.* 28 ἐνιαχοῦ δὲ διὰ τὸ προσκόπτειν σχίζεσθαι συμβαίνει τὸν ἄνεμον.

[3] *Contra* R-F "consists of contraries"; "est effectivement constitué de contraires" L-M.

[4] R-F "depends on contraries"; "réside dans des contraires" L-M.

[5] Cp. Ps.-Arist. *De Mundo* 396 a 33 – b 11 καίτοι γέ τις ἐθαύμασε πῶς ποτε, εἰ ἐκ τῶν ἐναντίων ἀρχῶν συνέστηκεν ὁ κόσμος, λέγω δὲ ξηρῶν τε καὶ ὑγρῶν, ψυχρῶν τε καὶ θερμῶν, οὐ πάλαι διέφθαρται καὶ ἀπόλωλεν, ὡς κἂν εἰ πόλιν τινὲς θαυμάζοιεν, ὅπως διαμένει συνεστηκυῖα ἐκ τῶν ἐναντίων ἐθνῶν, πενήτων λέγω καὶ πλουσίων, νέων γερόντων, ἀσθενῶν ἰσχυρῶν, πονηρῶν χρηστῶν. ἀγνοοῦσι δὲ ὅτι τοῦτ' ἦν πολιτικῆς ὁμονοίας τὸ θαυμασιώ-

αιρεῖται τὰ τὴν οὐσίαν ἐξ ἐκείνων ἔχοντα, Arist. *Protr.* B 33, quoted *ad* 4 a 5-6 (p. 79 above).

If one reckons with some power responsible for the organization of being, too, a conception which assumes that both members of the opposition are essential is preferable (taking into account also the comparative scarcity of form, soul, and order): one might assume that the *intention* to lead all things towards the best is lacking, rather than to be forced to assume that the capacity to do so is.

The present argument is the more plausible as the power we were speaking of concerns God, who is most convincingly represented as a rational, deliberating kind of authority.[1] It seems, at any rate, that Th. himself was quite prepared to conceive of φύσις (or even νοῦς) as a 'divine' tendency not invariably directed towards order (or form, or soul).

IX.3 (11 b 12-23): *Even in the elementary principles many things on closer observation appear to be at random, as is illustrated by the elementary changes connected with the changes of the earth, which are neither 'better' nor 'that which is for the sake of something'; if they are anything short of being random, it would appear that they follow some necessity. That the first bodies are subject to chance processes may be also inferred from phenomena in the air and in other regions of the cosmos.*

What entities, then, show the highest degree of order? *(The question whether what shows the highest degree of order may justly be called the best is disregarded here.) Among the objects of sense, the heavenly bodies might seem to qualify as such, sc. in view of their rotation (which on the other hand does not show much uniformity either).*

τατον, λέγω δὲ τὸ ἐκ πολλῶν μίαν καὶ ὁμοίαν ἐξ ἀνομοίων ἀποτελεῖν διάθεσιν, ὑποδεχομένην πᾶσαν καὶ φύσιν καὶ τύχην.
ἴσως δὲ καὶ τῶν ἐναντίων ἡ φύσις γλίχεται καὶ ἐκ τούτων ἀποτελεῖ τὸ σύμφωνον, οὐκ ἐκ τῶν ὁμοίων, ὥσπερ ἀμέλει τὸ ἄρρεν συνήγαγε πρὸς τὸ θῆλυ καὶ οὐχ ἑκάτερον πρὸς τὸ ὁμόφυλον, καὶ τὴν πρώτην ὁμόνοιαν διὰ τῶν ἐναντίων συνῆψεν, οὐ διὰ τῶν ὁμοίων. (κ.τ.λ.).

Still there is no ground for suggesting that our passage "includes a possible allusion to the Stoic doctrine of theodicy, without any Stoic philosopher being mentioned" as Grayeff ((1974) 61 n.) has it.

[1] It should be noted that in the present passage there is no trace of the conception that phenomena such as thunderbolts do not have their origin in God: "For it is not correct (to say) that God should be the cause of disorder in the world; nay (He is) the cause of its arrangement an order", as the Arabic translation of Th.' *Meteor.* has it (Daiber (1992) 270). See Introduction p. 31 n. 3.

Among the non-sensible objects the mathematical objects might seem to show the highest degree of order, as being without motion and change; unless, assuming that it is order that we are searching for, entities could be found which are better qualified to serve as first principles; and unless one were to assume that the shapes of the elementary principles are indivisible.

11 b 12-7 φαίνεται δὲ ... ἐν ἄλλοις.

Th. finally applies the question of the limits of teleological explanation to the principles themselves, among which from a Peripatetic point of view a maximum of order might be expected (see *ad* 6 b 27-8, pp. 288-9); hence **καὶ** ἐν τοῖς πρώτοις here presumably "even".[1]

τὰ πρῶτα here apparently refers to the elementary principles,[2] i.e. τὰ πρῶτα σώματα;[3] compare

HP I.2.4 ἡ μὲν οὖν τῶν μεγίστων σχεδὸν εἴρηται· λέγω δ' οἷον ῥίζης καυλοῦ τῶν ἄλλων· αἱ γὰρ δυνάμεις καὶ ὧν χάριν ἕκαστον ὕστερον ῥηθήσονται. ἐξ ὧν γὰρ καὶ ταῦτα καὶ τὰ ἄλλα σύγκειται πειρατέον εἰπεῖν *ἀρξαμένους ἀπὸ τῶν πρώτων. πρῶτα δέ ἐστι τὸ ὑγρὸν καὶ θερμόν·* ἅπαν γὰρ φυτὸν ἔχει τινὰ ὑγρότητα καὶ θερμότητα σύμφυτον, ὥσπερ καὶ ζῷον, ὧν ὑπολειπόντων γίνεται γῆρας καὶ φθίσις, τελείως δὲ ὑπολιπόντων θάνατος καὶ αὔανσις.

Ign. 6 ἄτοπον δὲ καὶ τοῦτο πάλιν, εἰ ἡ ἀρχὴ καὶ τὸ πρῶτον ἐν ὑποκειμένῳ· τὸ γὰρ θερμὸν καὶ ἡ τούτου δύναμις ἀρχή.
(Cp. 4 τοῦτο γὰρ ἦν καὶ τὸ παρὰ τῶν παλαιῶν λεγόμενον, ὅτι τροφὴν ἀεὶ ζητεῖ τὸ πῦρ ὡς οὐκ ἐνδεχόμενον αὐτὸ διαμένειν ἄνευ τῆς ὕλης. ⟨διὸ⟩ καὶ ἄτοπον φαίνεται πρῶτον αὐτὸ λέγειν καὶ οἷον ἀρχήν, ...)

Cp. 531.14-5 FHS&G ἐπὶ τὰ στοιχεῖα ἀναφέρων τὰ πρῶτα, Introduction p. 1 n. 2; also Arist. *Protr.* B 35 D., *ad* 4 a 5-6.

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[1] Differently 7 a 1.

[2] "Con questa espressione Teofrasto non si riferisce certamente ai motori immateriali o alle realtà soprasensibili e neppure ai corpi celesti (...). Probabile che si debba intendere ***negli elementi primi***: terra, aria, aqua, e, comunque, si deve intendere in un senso che si possa accordare con ciò che si dice nella linea che segue.", Reale *ad loc.*

The other interpretors assume that 'the first things of nature' are referred to: "Et même dans les premiers [êtres naturels], on voit manifestement beaucoup de choses se produire aussi par chance", tr. L-M.

[3] Emp. A 34 DK (= Galenus *In Hipp. nat. hom.* XV.32 K.) 'Ε. ἐξ ἀμεταβλήτων τῶν τεσσάρων στοιχείων ἡγεῖτο γίνεσθαι τὴν τῶν συνθέτων σωμάτων φύσιν, οὕτως ἀναμεμειγμένων ἀλλήλοις τῶν πρώτων, ... (cp. also Emp. B 38, p. 74 n. 1 *ad* 4 a 2-3).
If this use comes somewhat unexpectedly here, it may remind us of the double reference of αἱ ἀρχαί in 6 b 21-2 (see pp. 280 ff. *ad loc.*; also p. 285 *ad* 6 b 23).

Even in the elementary principles, then, many things when observed more closely appear to be random. The somewhat curious syntax of **ἐπιθεωρούμενα πολλά**[1] seems to be due to the fact that the elementary principles themselves are invisible: what we see is not the randomness of the principles themselves, but, when observing them with due attention, many random phenomena testifying to the randomness of the principles themselves. After φαίνεται δὲ καὶ ἐν τοῖς πρώτοις Th., as it were, adjusts the construction to the complexity of the situation.

For the compound,[2] compare

Ps.-Hippocr. *Acut.* (sp.) 8 ἀλλὰ χρὴ τοὺς τοιούτους προπυριῶντα φλεβοτομέειν ἐν ἀρχῇ εὐθέως μετεώρων ἐόντων πάντων τῶν λυπεόντων ῥευμάτων· εὐβοηθητότερα γάρ ἐστιν· καὶ ἀναλαμβάνοντα καὶ τὰς κρίσιας ἐπιθεωρέοντα φαρμακεύειν, ...

Ps.-Arist. *Rhet. ad Alex.* 1434 b 26-30 (...·) ἂν δὲ ἀστεῖον γράφειν θέλῃς λόγον, παραφύλαττε ὡς μάλιστα ὅπως τὰ ἤθη τῶν λόγων ὁμοιοῦν τοῖς ἀνθρώποις δυνήσῃ. τοῦτο δὲ ποιήσεις, ἂν ἐπιθεωρῇς τὰ μεγάλα τῶν ἠθῶν καὶ τὰ ἀκριβῆ καὶ τὰ μέτρια.

See also *ad* ἐπιζητήσειεν, 5 b 11.

ὡς ἔτυχεν seems first of all to imply irregularity: εἰσὶ δὲ τῶν μὲν ἄτακτοι καὶ ὡς ἔτυχεν οἱ ὄζοι *HP* I.8.3 (see also I.10.3, I.1.8), so that the association with πρὸς ἄλλοτ' ἄλλο μεθισταμένων (10 b 5-6) seems to have some plausibility; cp. Arist. *PA* 641 b 18-20 τὸ γοῦν τεταγμένον καὶ τὸ ὡρισμένον πολὺ μᾶλλον φαίνεται ἐν τοῖς οὐρανίοις ἢ περὶ ἡμᾶς, τὸ δ' ἄλλοτ' ἄλλως καὶ ὡς ἔτυχε περὶ τὰ θνητὰ μᾶλλον.

καὶ (ὡς ἔτυχεν) indicates that the random phenomena constitute the most extreme examples among the unorderly ones to be observed (and as such the most problematic instances from a teleological point of view).

The phenomena showing a random nature, testifying to a randomness at the level of the principles, are exemplified (**οἷον**) by **τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολάς**, for which see 10 b 4-5: αἱ ... ἐν αὐτῇ τῇ γῇ ἀλλοιώσεις καὶ μεταβολαί where, as we have argued, πρὸς ἄλλοτ' ἄλλο μεθισταμένων indicates that these changes are due to changes, 'now in this direction,

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[1] For a more natural construction, with the simplex, cp. 144A.22-7 FHS&G ὥσπερ οὖν καὶ τοῦτο κατὰ μὲν τὸν ἴδιον λόγον ἁπλοῦν ἐστι, τὸ τριχῇ λέγω διαστατόν, πρὸς μέντοι τὴν ὕπαρξιν αὐτοῦ χρεία καὶ τῆς ὕλης, καὶ οὕτω λοιπὸν τὸ ἐν ὑπάρξει σῶμα οὐκ ἔστιν ἁπλοῦν, ἀλλὰ σύνθετον ἐξ ὕλης καὶ εἴδους, οὕτω κἀπὶ τούτων (sc. τῶν φυσικῶν εἰδῶν) ἔχει· κατὰ μὲν γὰρ τὸν ἴδιον αὐτῶν λόγον θεωρούμενα ἁπλᾶ ἐστιν, ὅταν μέντοι ὡς ὑπάρχοντα καὶ ἐνεργείᾳ αὐτὰ ὄντα θεωρήσωμεν, ...

[2] Cp. also Ps.-Arist. *Color.* 792 b 1 κατὰ γὰρ τὴν πρὸς ἄλληλα κρᾶσιν οὕτως ληπτέον, ἐξ ὑποκειμένου τεθεωρημένου χρώματος ποιοῦντας τὴν μίξιν, ... (λόγον ἔχει) μὴ εὔσημον ἐν τῷ παντί, καὶ προστεθεωρημένον κατασκευάζειν ὁμοίως.

now in that' on the part of the elementary bodies: see commentary *ad loc.* **λεχθέντα** obviously refers to the earlier passage. Cp. *CP* I.14.4 διὰ τὴν πρότερον λεχθεῖσαν αἰτίαν; VI.11.4 τὸ πρῶτον λεχθὲν ἀπορίαν; VI.12.1 τὴν αἰτίαν ... τὴν μικρῷ πρότερον λεχθεῖσαν.

These elementary changes connected with the changes of the earth may well serve as an example since (**γάρ**) they are neither 'the better' nor 'that which is for the sake of something' (**οὔτε ... τὸ βέλτιον οὔτε τὸ τινὸς χάριν**); if they are anything other than random (**ἀλλ' εἴπερ** introducing, after a negative statement, the most that *might* be granted: see *ad* 7 b 13), they appear to follow some necessity.

For **ἀνάγκῃ τινί** see 10 a 26-7 and 10 b 19 , pp. 490 f., 511 ff. above. It is likely that here, too, Th. is thinking of changes under the influence of the heat of the sun and of the seasons in particular. **κατακολουθεῖν** τινι "to proceed in accordance with", "follow", compare

> *CP* I.12.1 ὥσπερ τινές φασιν τὰς μὲν ῥίζας αὐξάνεσθαι μετοπώρου καὶ χειμῶνος, τὰ δὲ στελέχη καὶ τοὺς ἀκρεμόνας ἔαρος καὶ θέρους καὶ μάλισθ' ὑπὸ ⟨τὸ⟩ ἄστρον· τοῦτο δὲ κατὰ λόγον οὕτως, συμβαίνειν γὰρ τῇ πρώτῃ γενέσει *κατακολουθεῖν*· ἐν ἐκείνῃ γὰρ τὴν ῥίζαν πρότερον ἢ τὸν βλαστὸν ἀφιέναι πάντα, προϋπάρχειν γὰρ ἀναγκαῖον ᾧ τὴν τροφὴν ἐπάξεται.
>
> Epic. III.134 ἐπεὶ κρεῖττον ἦν τῷ περὶ θεῶν μύθῳ κατακολουθεῖν ἢ τῇ τῶν φυσικῶν εἱμαρμένῃ δουλεύειν·[1] ὁ μὲν γὰρ ἐλπίδα παραιτήσεως ὑπογράφει θεῶν διὰ τιμῆς, ἡ δὲ ἀπαραίτητον ἔχει τὴν ἀνάγκην.

As compared with συνακολουθεῖν, which may denote mere effects ("follow accidentally", "be concomitant", as it were: see *ad* 7 a 3),[2] κατακολουθεῖν seems to connote authority, or at least a certain hierarchy between what follows and what is followed.[3] For the idea cp. 5 b 23-6: συμβαίνει γὰρ οἷον κατὰ συμβεβηκὸς ὑπὸ τῆς κυκλικῆς περιφορᾶς καὶ εἰς τοὺς τόπους καὶ εἰς ἄλληλα τὰς μεταβολάς, pp. 233 ff. above).

With **πολλὰ δὲ καὶ ἐν τῷ ἀέρι τοιαῦτα** Th. adds that many phenomena of this kind (viz. chance processes testifying to irregular changes at the level of the elementary principles) appear in the air as well; of these phenomena too

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[1] "it were better to follow the myths about the gods than to become a slave to the destiny of the natural philosophers", tr. BAILEY.

[2] Cp. the use of παρακολουθεῖν in *Vent.* 1: ὅτι δ' ἑκάστοις (sc. ἀνέμοις) αἱ δυνάμεις καὶ ὅλως τὰ παρακολουθοῦντα ("the constant attributes") κατὰ λόγον ἀκολουθεῖ πειρᾶσθαι χρὴ λέγειν, οἷσπερ σχεδὸν διαφέρουσιν ἀλλήλων.—the simplex, without bearing focus, taking the place of the compound (see p. 258 with n. 2).

[3] Epic. Fr. (*Phys.*) 58 Bailey εἰ ταῖς τῶν ἀνθρώπων εὐχαῖς ὁ θεὸς κατηκολούθει; also "follow a historical or philosophical authority", LSJ s.v.

it holds that they cannot be explained teleologically, but at best follow some external constraint. (*καὶ* ἐν τῷ ἀέρι, then, is on a par with τῆς γῆς rather than with ἐν τοῖς πρώτοις).

For the kind of irregularities in the air which Th. may have in mind see e.g.

Vent. 12 τοῦ δὲ ἅμα τῇ καταφορᾷ τοῦ ἡλίου λήγειν (sc. the etesians) καὶ νύκτωρ μὴ πνεῖν αἴτιον τὸ τὴν χιόνα τηκομένην παύεσθαι δυομένου, καὶ νύκτωρ μὴ τήκεσθαι δεδυκότος. *οὐ μὴν ἀλλ' ἐνίοτε πνέουσιν*, ὅταν πλείων ἡ τῆξις γένηται· καὶ γὰρ τῆς ἀνωμαλίας αἴτιον τοῦτο ὑποληπτέον. ὁτὲ μὲν γὰρ μεγάλοι καὶ συνεχεῖς, ὁτὲ δ' ἐλάττους καὶ διαλείποντες πνέουσι διὰ τὸ τὰς τήξεις ἀνωμαλεῖς γίνεσθαι.[1]

55 καὶ αὗται μὲν οἷον χειμεριναί τινες ἐπίπνοιαι καὶ ἀντικόψεις· αἱ δ' ἐπ' Ὠρίωνος ἀνατολῇ καὶ δύσει τῶν πνευμάτων *ἀκρισίαι* συμβαίνουσιν, ὅτι ἐν μεταβολαῖς ἀεὶ πάντα μάλιστα πέφυκεν *ἀοριστεῖν*. ὁ δ' Ὠρίων ἀνατέλλει μὲν ἐν ἀρχῇ ὀπώρας, δύνει δὲ ἐν ἀρχῇ χειμῶνος. ὥστε διὰ τὸ μήπω καθεστᾶναι μηδεμίαν ὥραν, τῆς μὲν γινομένης, τῆς δὲ παυομένης, ἀνάγκη καὶ τὰ πνεύματα ἀκατάστατα καὶ ἄκριτα εἶναι, διὰ τὸ ἐπαμφοτερίζειν τὰ ἐξ ἑκατέρας, ὅθεν δὴ καὶ χαλεπὸς λέγεται καὶ δύνων καὶ ἀνατέλλων εἶναι, διὰ τὸν ἀοριστίαν τῆς ὥρας. ἀνάγκη γὰρ ταραχώδη καὶ ἀνωμαλῆ εἶναι.

The observation of apparently chance processes in the first bodies is not limited to subterranean phenomena and phenomena in the air: they may be observed in other regions of the cosmos as well (**καὶ ἐν ἄλλοις**). The phrase presumably only suggests the universality of such phenomena ('and elsewhere'); at the same time what happens on earth (the influences of sun and air on animals and plants) may be referred to. (Cp. 10 b 16-20, where the facts of the nutrition and generation of animals were likewise described in terms of ἀνάγκη).[2]

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[1] See STEINMETZ (1964) 32 *ad loc.* : "Zu der Wirkung der Sonne [sc.] dass sie auf ihrer *täglichen* Umlaufbahn das Gleichgewicht der Luft stört und die Antapodosis auflöst, wird hier eine zweite Wirkungsweise angedeutet: Auf ihrer *Jahresbahn* verursacht sie die Schneeschmelze und damit eine Vergrösserung der Stoffmenge des Windes im Norden, natürlich durch die Anathymiasis: Stoff des Windes ist also *verdunstetes Wasser*; er ist daher feucht und schwer. Auch wenn auf diese Art das Gleichgewicht der Luft gestört wird, tritt der Zwang zum Ausgleich ein: die Luft muss in eine Zone geringerer Dichtigkeit abfliessen. Der Bewegungsanstoss ist wiederum mechanisch". (*contra* COUTANT/EICHENLAUB: "There is no indication of annual variation here, however." 71 *ad loc.*).

[2] Diocles' analysis of human disease would, I think, exemplify the phenomena referred to excellently: Fr. 30 W. Διοκλῆς αἰτίας πλείστας τῶν νόσων δι' ἀνωμαλίαν γίνεσθαι τῶν ἐν τῷ σώματι στοιχείων καὶ τοῦ καταστήματος ἀέρος.

11 b 17-21 μάλιστα δ' ... τεταγμένον)·

γε R-F; τε PJ²CL; om. A; τήν τε τάξιν ** τῶν μὲν ("intercidisse καὶ τὸ ὡρισμένον opinor cf. p. VI ᵇ28") USENER (1890).

Th. finally tries to make out what entities show the highest degree of order: **τήν γε τάξιν** intimates that the question whether what shows most order may be justly called the best, too, is disregarded here. (Cp. 7 b 5 ff.) Among the objects of sense, the heavenly bodies might seem to qualify[1] owing to their κυκλοφορία, acknowledged as the most orderly kind of locomotion; cp. Arist. *Cael.* 287 b 24 ff. (with regard to the first heaven) ἀλλ' εἰ *μηδὲν ὡς ἔτυχε* μηδ' ἀπὸ ταὐτομάτου ἐνδέχεται ἐν τοῖς ἀϊδίοις εἶναι, ὁ δ' οὐρανὸς ἀΐδιος καὶ ἡ κύκλῳ φορά (κ.τ.λ.). So viewed, both **ἂν δόξειεν** and **μάλιστα** yield a rather faint praise, this in accordance with Th.' comments on the lack of uniformity to be observed in the movements of the heavenly bodies (which calls into question the theory of a desire for rest: see II.1, 5 a 14 ff.).

Of the non-sensible objects, the mathematical objects might seem to show the greatest amount of order,[2] as being without motion and change, and because their constituent parts show a maximally fixed relationship towards each other (cp. *ad* ἀτακτοτέρα 4 a 4). **εἰ μὴ ἄρα καὶ πρότερα τούτων** (for which cp. εἰ δ' ἑτέρα τις οὐσία προτέρα καὶ κρείττων ἐστίν, 4 b 6)[3] adds *in parenthesi*, even before the mathematicals are named, the possibility that there *might* exist entities superior to them. This subsidiary thought[4] added in advance[5] reminds us that in the preceding no first principles have been identified which could rival the mathematicals in terms of the absence of motion and change;[6] see esp. the argument to the effect that the origin of movement is not necessarily without movement itself, 7 b 15 ff.

Now from an Aristotelian point of view, the mathematicals are obviously unsuited to serve as the highest principles, and Th. suspected them to be merely products of our own contrivance (4 a 21 – b 2). In view of Th.' scep-

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[1] Cp. Arist. *PA* 641 b 20 quoted *ad* 11 b 12-6; also *Phys.* 196 a 34.

[2] Cp. Arist. *Met.* 1078 a 37 – b 6, quoted *ad* μείζω 4 a 9.

[3] The difference in number reflects a difference in the scope of these two passages: in 4 b 6 Th. was trying to identify the highest principle (or principles, as the case might be); here he is adding a proviso while answering the question in what entities the greatest order may be found, a question merely elicited by the teleological conceptions discussed in what precedes.

[4] For εἰ μὴ ἄρα see 4 b 10 (p. 122 above).

[5] τούτων refers to τὰ μαθηματικά: *contra* R-F, who assume that reference is to τὰ οὐράνια.

[6] On the understanding that the solution formulated in Ch. I.5 (4 b 18 ff.), and the intermediate conclusion in I.6 (5 a 5 ff.) constitute the point of departure for the problems raised in the sequel. See commentary *ad locc.*

ticism with regard to the ontological status of these objects there might be some irony in this result, and in **καὶ** (πρότερα) in particular.[1] If on the assumption of a tendency towards the good the mathematical objects prevail, the criterion of τάξις might seem to be questionable indeed.

εἰ γὰρ καὶ μὴ πᾶν ἀλλ(ὰ) ... πλέον τὸ τεταγμένον makes explicit the restriction implied in μάλιστα, 11 b 17. Like the heavenly bodies among the objects of sense, the mathematicals among the objects of thought fail to satisfy the most stringent norm: even in them (**ἐν τούτοις**) there is some aspect of disorder, viz. in sofar as they are divisible;[2] see Th.' suggestion in the sequel that *indivisible* shapes would qualify better.

In fact, indivisibility is the one property among those traditionally connected with the highest level of being which, according to Peripatetic theory at least, the mathematical objects cannot lay claim to; see e.g. the refutation of the possibility of indivisible lines in the Pseudo-Aristotelian treatise *De lineis insecabilibus*; e.g. 971 a 3-5 ἐπεὶ δὲ οἵ τε λόγοι δι' ὧν ἐπιχειροῦσι πείθειν ἀσθενεῖς εἰσὶ καὶ ψευδεῖς, ἐναντίαι δὲ δόξαι πᾶσι τοῖς ἰσχύουσι πρὸς πίστιν, φανερὸν ὅτι οὐκ ἂν εἴη γραμμὴ ἄτομος.

11 b 21-3 —πλὴν εἴ ... τῶν ἀτόμων.

The conclusion that among the objects of thought mathematical objects show the greatest order (that is, again, if (1) it is order we are searching for, and (2) no entities can be found that are better qualified to serve as 'highest principles') meets with a second proviso: this may be maintained, *unless* (for **πλὴν εἰ** see *ad* 7 a 22-3) one assumed the shapes (sc. of the first bodies) to be such (**τοιαύτας**, i.e., apparently, indivisible)[3] as the 'atoms' postulated by Democritus. In this case, then, maximum order would not be found on the level of the 'highest' principles, but at the lowest (likewise imperceptible) level of being.

For the orderliness of the shapes (for **τὰς μορφάς** see *ad* 6 b 23-8) ascribed to the atoms by Democritus,[4] cp. *CP* VI.17.11 ἐπεὶ τά γε σχήματα Δημοκρίτου (καθάπερ ἐλέχθη) τεταγμένας ἔχοντα τὰς μορφάς, τεταγμένα

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[1] L-M rightly argue that εἰ μὴ ἄρα does not necessarily involve irony (cp. 4 b 10); the irony involved here is due to the context. Cp. Bakker (1988) 229.

[2] Cp. Melissus B 10 DK εἰ γὰρ διῄρηται ... τὸ ἐόν, κινεῖται; see also 5 a 8 ff.

Differently L-M: "Théophraste fait sans doute allusion ici à l'existence de grandeurs irrationnelles." (*ad loc.*).

[3] See preceding note.

[4] I fail to see that the present passage would justify Grayeff's remark to the effect that "Theophrastus' *Metaphysics* seems to contain references to the atomic theory of Epicurus, which, however, is there attributed to Democritus (11^{b}21-3)" (1974) 61 n.

καὶ τὰ πάθη καὶ τὰς αἰσθήσεις ἐχρῆν ποιεῖν.[1] First bodies endowed with a form independent of the arrangement of parts would pass the test for order better than mathematical objects, which fall short of indivisibility.[2]

IX.4 (11 b 24 – 12 a 2): *The amount of order actually found in different parts of the cosmos requires further discussion. In any case, we must try to grasp the limit which applies, both in nature and in the being of the whole, to explanation of phenomena as being for the sake of some end and due to an impulse towards the better. For the study of the whole starts from this: to determine the constituent parts of reality and the relations between them.*

11 b 24 ἀλλὰ δὴ τούτων μὲν πέρι σκεπτέον.

For the use of **ἀλλὰ** (**δή**) interrupting an argument cp. the final paragraph of the first book of *HP* and the last sentence of *Ign.*:

> *HP* I.14.5 ἀλλὰ δὴ τὰς μὲν τῶν μορίων διαφορὰς καὶ τῶν ἄλλων οὐσιῶν ἐκ τούτων πειρατέον θεωρεῖν. περὶ δὲ τῶν γενέσεων μετὰ ταῦτα λεκτέον· τοῦτο γὰρ ὥσπερ ἐφεξῆς τοῖς εἰρημένοις ἐστίν. (Cp. I.1.1 τῶν φυτῶν τὰς διαφορὰς καὶ τὴν ἄλλην φύσιν ληπτέον κατά τε τὰ μέρη καὶ τὰ πάθη καὶ τὰς γενέσεις καὶ τοὺς βίους· ...; after the 'parts' of plants have been identified their differences are discussed in I.3.1 ff.: εἰλημμένων δὲ πάντων τῶν μορίων ὡς εἰπεῖν τὰς τούτων διαφορὰς πειρατέον ἀποδιδόναι καὶ τὰς ὅλων τῶν δένδρων καὶ φυτῶν οὐσίας. I.2.6.)

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[1] Cp. *CP* VI.7.2: τὸ γὰρ ἄτομον ἀπαθές (where ἄτομον is Scaliger's emendation for MSS. ἄτοπον). In his treatment of the cause of the differences between savours Th. suggests that Democritus' atoms might serve to account for the δυνάμεις rather than for the different savours themselves, so that here again the explanation would not be entirely quantitative: *CP* VI.1.2 αὐτὸ γὰρ τοῦτο πρῶτον ἔχει τινὰ σκέψιν, πότερα τοῖς πάθεσι τοῖς κατὰ τὰς αἰσθήσεις ἀποδοτέον, ἢ (ὥσπερ Δημόκριτος) τοῖς σχήμασιν ἐξ ὧν ἑκάστοις (εἰ μὴ ἄρα καὶ ταῦτα συνάπτει πως εἰς τὰς δυνάμεις, κἀκείνων λέγεται χάριν), ἢ καὶ εἴ τις ἄλλος τρόπος ἐστὶν παρὰ τούτους. (see also VI.2.1). Th. rejects the explanation by means of figures, as well as the complication involved—which only increases the difficulty: ἀλλὰ γὰρ αἱ μὲν κατὰ ⟨τὰ⟩ σχήματα καὶ τὰς μορφὰς δυνάμεις πλείω, καὶ περὶ πλειόνων, ἔχουσιν ἀπορίαν. (VI.2.4).

[2] It may be noted that, if this interpretation is correct, the present passage seems to corroborate FURLEY's suggestion that Democritus undertook "the enterprise of defining atomic shapes entirely by outline, to avoid discussing the arrangement of parts" (1987) 128, as well as his belief "that Democritean atoms were also theoretically indivisible" (129).
Noticeably, the two interpretations proposed by L-M lead to the opposite conclusion: "Ou bien Théophraste suggère que les formes mathématiques, étant celles d'atomes désordonnés, hériteront du désordre de leur support (...), ou bien il fait allusion au fait que les formes atomiques étant chez Démocrite infiniment variées, seront pour la plupart d'entre elles irrégulières (...). Aucune de ces deux interprétations n'est entièrement convaincante." (*ad loc.*).

Ign. 76 ἀλλὰ περὶ μὲν τούτων ἱκανῶς εἴρηται μέχρι γε τοῦ νῦν, ἀκριβέστερον δὲ πάλιν ἐν ἄλλοις ἐροῦμεν περὶ αὐτῶν.

Also

CP VI.12.12 f. ἀλλὰ δὴ τούτων μὲν τοιαῦταί τινες αἱ αἰτίαι. (13.1) περὶ δὲ δὴ τῶν καρπῶν τῶν τροφίμων δῆλον ὅτι ῥᾴον ὁ λόγος· ...

VI.6.10 f. πάλιν δ' αὖ θάτερον (sc.ἄτοπον), εἰ ἐκ μὲν τούτων (sc. ἐκ τοῦ πικροῦ καὶ γλυκέος) μηδὲν, ταῦτα δ' ἐκ τῶν ἄλλων, οὐ γὰρ ἀρχῶν ἡ τοιαύτη φύσις. εἰ μὴ ἄρα πλεοναχῶς αἱ ἀρχαὶ καὶ κατὰ πλείους τρόπους, ὅπερ ἔοικεν, ὥσπερ κατὰ συστοιχίαν ἐνίων λεγομένων. ἀλλ' οὖν δὴ τούτων μὲν πέρι λόγος ἕτερος. (7.1) αἱ δὲ γενέσεις τῶν χυμῶν ...

VI.3.5 f. ἀλλὰ περὶ μὲν τούτου τὴν αἰτίαν ὕστερον λεκτέον. (4.5) αἱ δὲ ἰδέαι τῶν χυμῶν ... (Cp. VI.9.4.)

VI.10.10 f. ἀλλὰ περὶ μὲν τούτων ἅλις. (11.1) ἐκεῖνο δ' ὡς οἰκεῖον τῶν χυλῶν πειρᾶσθαι δεῖ διαιρεῖν ...

These passages seem to rule out that the present phrase serves to *identify* the subjects to be discussed, as R-F have it: "But at any rate these are the questions we must inquire into." (also REALE, TRICOT); the issue is rather that the questions discussed in what precedes require further discussion.[1] This conclusion presumably concerns the discussion of the limits of final causation in Ch. IX—and perhaps, in view of the paragraph immediately preceding, the limits set to τάξις in particular.

11 b 24-7 ὃ δ' ἐξ ἀρχῆς ἐλέχθη ... τῆς εἰς τὸ βέλτιον ὁρμῆς.

μὲν ... δέ contrasts the difficulties which require further investigation (referred to by τούτων above) with the obligation to try to find some boundary. **ἐξ ἀρχῆς** refers, I submit, to the opening words of the treatise: πῶς *ἀφορίσαι* δεῖ, 4 a 2;[2] compare

Arist. *Cael.* 268 b 22-6 ὥστ' ἀνάγκη πᾶσαν εἶναι τὴν ἁπλῆν φορὰν τὴν μὲν ἀπὸ τοῦ μέσου, τὴν δ' ἐπὶ τὸ μέσον, τὴν δὲ περὶ τὸ μέσον. καὶ ἔοικεν ἠκολουθηκέναι κατὰ λόγον τοῦτο τοῖς ἐξ ἀρχῆς· τό τε γὰρ σῶμα ἀπετελέσθη ἐν τρισὶ καὶ ἡ κίνησις αὐτοῦ., where reference is to I.1, 268 a 7 ff.

For the relative cp. *CP* VI.17.12 (17.11 ἀλλὰ ταῦτα μὲν οὕτω λεκτέον.) ὃ δὲ καὶ μικρῷ πρότερον ἐλέχθη, καὶ νῦν πάλιν εἴπωμεν· ὅτι ...; also ὅπερ καὶ πρότερον ἐλέχθη *CP* V.14.3, ὅπερ ἐλέχθη πρότερον, *CP* I.4.6; Appendix 7.24 FHS&G (Vol. II p. 604 = *Cod. Vat. Gr.* 2306).

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[1] Cp. THEILER on the use of the σκεπτέον and πειρατέον: "Das ist ... eine echt theophrastische (nicht aristotelische) Wendung für den Abschluss einer Problemdarlegung", (1958) 102.

[2] Cp. REALE: "Cioè nelle prime linee del trattato."; *contra* R-F and TRICOT, who assume that reference is to 11 a 1-3—without explaining in what sense this passage would be an ἀρχή.

The identification of some limit remains as a desideratum: **λαμβάνειν** here, in view of πειρατέον, involves grasping a limit (cp. 4 b 14, 8 a 20, 9 a 27, 10 b 16) rather than assuming one (cp. 7 a 16, 8 a 3, 11 a 2). The limit to be grasped now appears to be somewhat different from the ἀφορισμός we were searching for at the beginning of the treatise. There the question concerned the delimitation of the study of the first things from the study of nature (and of the two provinces themselves; the latter supposedly being "less orderly" than the first one, which is "definite and always the same"); now our field of inquiry regards "nature as well as the being of the whole" (**καὶ ἐν τῇ φύσει καὶ ἐν τοῦ σύμπαντος οὐσίᾳ**).[1] The limit we should try to find in nature as well as in the being of the whole regards the final cause and the tendency towards the better. As has been said *ad* 7 a 21, **τοῦ ἕνεκά του** (instead of τοῦ οὗ ἕνεκα) refers to the final cause as we meet it during our investigations, whether with regard to the individual entities,[2] or to groups of entities, rather than to *the* final cause as an all-pervading principle. **τῆς εἰς τὸ βέλτιον ὁρμῆς** likewise refers to the efficient cause in each case—or, where it is possible ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν, here again, operative in groups of entities—ὁρμή being the usual term for, e.g., the impulse toward sprouting or gestation (ἡ ὁρμὴ πρὸς τὴν βλάστησιν *CP* I.8.1, ὁρμᾷ πρὸς κύησιν *CP* I.14.1); that is, it refers to the impulse itself rather than to what the impulse is for.[3]

The delimitation of τὸ ἕνεκά του thus amounts to the question how much order, stability or form is actually desirable in each case; that of ἡ εἰς τὸ βέλτιον ὁρμή to the question of the restrictions that apply to the impulse towards the better in each case, presumably including the possibly innate φυσικὴ ὄρεξις on the part of the heavenly bodies.[4]

11 b 27 – 12 a 2 αὕτη γὰρ ... πρὸς ἄλληλα.

αὕτη, sc. ἐν τίσιν ... πρὸς ἄλληλα; this is the starting point[5] of the study of the whole;[6] compare

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[1] Cp. 8 a 22-3, contrast 10 a 2-3.

[2] Presumably including the comprehensive whole: cp. 10 a 22-5.

[3] Cp. *CP* I.12.6 ἀλλὰ τοῦτο οὐ τῆς φύσεως θετέον, ὃ διακωλύειν ποτὲ συμβαίνει τι τῶν ἐκτός, ἀλλ' ὅσα τῇ ὁρμῇ γίνεται τῇ αὐτῆς. 13.9 οὐ μὴν ἀλλ' οὐδέν γε (ὡς εἰπεῖν) τῶν δικαρπούντων ὅμοιον γίνεται τοῖς ἐξ ἀρχῆς, ἀλλ' ὡς ὁρμὴν μόνον τοῦ φυτοῦ λαμβάνοντος, οὐ συνεκτελέσαντος δὲ τοῦ ἡλίου καὶ τοῦ ἀέρος.

[4] See 5 a 24, 6 a 10.

[5] See 4 a 9.

[6] *Contra* R-F (with regressive interpretation of αὕτη, so that ἐν τίσιν ... πρὸς ἄλληλα explains τῆς τοῦ σύμπαντος θεωρίας: "this is the beginning of the inquiry about the universe,

Arist. *GC* 338 b 11-3 ἀρχὴ δὲ τῆς σκέψεως πάλιν αὕτη, πότερον ὁμοίως ἅπαντα ἀνακάμπτει ἢ οὔ, ...

Here again the subject-matter of the discussion is affected by the preceding argument: ἡ ὑπὲρ τῶν πρώτων θεωρία from the beginning of the treatise (4 a 2-3) has been replaced by **ἡ τοῦ σύμπαντος θεωρία**—which might indicate that Th. doubts whether a delimitation of the study of the first things from the study of nature can be made after all.

The study of the whole, then, starts form the following main questions:

(a) The identification of the entities that make up the totality of being (**ἐν τίσιν τὰ ὄντα**).[1] Presumably, the question comprises not only (1) the ontological status of the mathematicals, (2) that of matter, and (3) the identification of the first principles, but also, in each investigation, (4) the identification of the entities and 'classes' of entities which require explanation.[2]

(b) The interrelation of the different entities (**πῶς ἔχει πρὸς ἄλληλα**), which may presumably be exemplified not only by (1) the question whether there is a 'connection' between them,[3] i.e., whether they are parts of the whole and if so, how they are parts,[4] and (2) the question of the proportion of disorder required by the cosmic order, but also by (3) the interrelation between natural entities, e.g., between the δύναμις of plants and the heat of the sun or the movements of the heavenly bodies.[5]

This redefinition of the study we are dealing with seems to imply that metaphysics has for its object the cosmos as a whole and its constituent parts, *qua* whole and *qua* parts of the whole respectively; comparison of this conception with the Aristotelian conception of metaphysics as the study of being *qua* being might seem to be characteristic of the direction in which, to judge by his *Metaphysics*, Th. was inclined to develop the ideas of his predecessor.

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i.e. of the effort to determine the conditions on which real things depend" (tr.). See also Introduction, p. 7-8.

[1] For τὰ ὄντα see 11 a 25, 8 a 15-9; for the use of the preposition, see 4 b 9-10. *Contra* R-F "to determine the conditions on which real things depend" (similarly Tricot) and Reale "su quali principi si fondino gli esseri"; but see L-M "en quoi sont les êtres"; Repici "what things that which really is <consists> in" (1990) 191—although the pregnant interpretation of τὰ ὄντα is not appropriate here (as *is* the case in the doxographical context of 6 b 17).

[2] Cp. Ch. VIII, esp. 9 b 19-21; also 9 b 3, τίνων ζητητέον αἰτίας; see *ad* 10 b 20-4. Th.' interest in such questions as whether e.g. the fruit is part of the parent or not (*HP* I.1.1 ff.) may be relevant, too. See Introduction, p. 26-7.

[3] 4 a 9 ff.; Introduction p. 32 with n. 4.

[4] 5 b 19-21; 8 a 3-7.

[5] Cp. 10 b 28 – 11 a 1, where πρὸς ἄλληλα διαφοράς might seem to be a less 'identity-directed' analogon of τινὰς ἰδέας.

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INDEX TO THEOPHRASTUS *METAPHYSICS*

This index has been compiled for the purpose of studying the Greek idiom, not statistics. The subdivisions of the lemmata are necessarily tentative, in the case of the particles especially.
Readings that differ from the manuscript tradition are marked by an asteriscus.

ἀγαθός	σπάνιόν τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν 11 a 19; οὐ πάντ' ἀγαθά 8 b 1
ἄγαν	(οὔτ') ἄγαν εὔσημος 4 a 19
ἄγειν	εἰς τὸ ἀμερές 8 a 4; εἰς τὸ ἄριστον 11 b 9; ἐπ' αὐτὸν τὸν νοῦν, τὸν θεόν 7 b 22
	ἀγόμενον εἰς ἐνέργειαν 8 a 11
ἄγνωστος	αὐτῷ τῷ ἀγνώστῳ 9 a 22; γνωστὰ τῷ ἄγνωστα εἶναι 9 a 19
ἄδεκτος	ἄδεκτόν τι καὶ ἀσύνδετον 5 b 18
ἀδύνατος	τὸ πλέον ἀδύνατον ᾖ εἰς τὸ χεῖρον ἡ μετάβασις 7 b 8; ὡς ἀδύνατον ἀεὶ κινούμενον εἶναι τὸ κινοῦν 7 b 16; ὡς ἀδύνατα 5 a 13
ἀεί	ἀεὶ κατὰ ταὐτά 4 a 6; ἀεὶ κατὰ ταὐτὰ καὶ ὡσαύτως 10 b 20; μεταδιδόναι τοῦ ἀεὶ καὶ τοῦ τεταγμένου 11 a 7
	ἀδύνατον ἀεὶ κινούμενον εἶναι τὸ κινοῦν 7 b 16; ἐνδεχόμενον μὴ ἀεὶ τὸ κινοῦν ἕτερον εἶναι καὶ ὃ κινεῖ 7 b 20
ἀζήτητος	ὑπερβατόν τι καὶ ἀζήτητον 6 a 3
ἀήρ	ἐν τῷ ἀέρι 11 b 17; τὰ περὶ τὸν ἀέρα καὶ τὴν γῆν 7 b 2
ἀΐδιος	ὅσοι τὸν οὐρανὸν ἀΐδιον ὑπολαμβάνουσιν 9 b 24; τὰ ἀΐδια 4 a 16
αἴσθησις	ἡ αἴσθησις τὰς διαφορὰς θεωρεῖ καὶ τὰς αἰτίας ζητεῖ 8 b 10-1; δοκεῖ ἡ αἴσθησις συναυδᾶν 7 b 19; αἱ αἰσθήσεις καίπερ ἐν τῷ πάσχειν οὖσαι δι' ἑτέρων ὅμως ἐν ψυχῇ γίνονται 5 b 5; ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες 9 b 9
αἰσθητός	ὁμοίως αἰσθητὰ καὶ νοητά 6 b 8; ὁμοίως ἔν τε τοῖς αἰσθητοῖς καὶ νοητοῖς 9 b 3-4; ἐν νοητοῖς, οὐκ αἰσθητοῖς 4 a 7; ἡ συναφὴ τοῖς αἰσθητοῖς 4 a 20; συνάπτει τοῖς αἰσθητοῖς 4 b 19; τὴν κίνησιν ἐν τοῖς αἰσθητοῖς 7 b 15; (μάλιστα ...ἔχειν τὴν τάξιν) τῶν αἰσθητῶν τὰ οὐράνια 11 b 18
αἰτία	αἰτίαν τῆς κινήσεως 4 b 21; τοῖς τῆς φύσεως αἰτία 5 a 1; τῆς αἰτίας μείζονα ζητεῖ λόγον 5 a 22; τῷ θεῷ τὴν αἰτίαν ἀνάπτουσιν 11 b 8
	τὰς αἰτίας ζητεῖ 8 b 11; μέχρι πόσου καὶ τίνων ζητητέον αἰτίας 9 b 3; μείζω τινὰ αἰτίαν ζητεῖ 7 b 19; τὸ μὴ ἔχειν αἰτίαν 9 b 11-2
αἴτιον	τῆς κυκλικῆς αἴτιον 5 b 7; ἐν τούτῳ τὸ αἴτιον 9 a 2; δι' αἰτίου θεωρεῖν 9 b 8
ἀκαριαῖος	ἀκαριαῖον, καὶ βέλτιον, τὸ εἶναι 11 a 18
ἀκίνητος	ἀκίνητος καθ' αὐτήν 4 b 22; ὡς ἀκινήτοις καὶ ἀμεταβλήτοις 4 a 7; τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν 10 a 20
ἄκρος	ἄκρα καὶ ἑκατέρωθεν 11 a 24; αὐτὰ τὰ ἄκρα καὶ πρῶτα 9 b 10
ἀλήθεια	τὴν ἀλήθειαν ἐν τούτοις (i.e. ἐν ταῖς ἀρχαῖς) 6 b 16
ἀληθής	οὐθὲν ἂν ἧττον ἀληθὲς ὑπάρχοι 8 a 16; τάχα δ' ἀληθέστερον 9 b 14; τάχα δ' ἀληθέστερον εἰπεῖν 8 b 12; μᾶλλον δ' ἀληθέστερον εἰπεῖν 9 b 23
ἀληθινός	ἐν ἀληθινωτέρῳ λόγῳ 5 a 12
ἀλλά	ἀλλὰ ...μέν 8 b 8; ἀλλὰ δή 11 b 24; ἀλλὰ ...γε 5 b 14; 8 a 14; 11 a 14;

ἀλλ' εἴπερ 7 b 13; 11 b 9; 11 b 16
ἀλλὰ λοιπόν 5 a 1; 5 b 18; οὐ μόνον ...ἀλλὰ καί 5 b 22
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τὰ ἄλλα 7 a 6; 10 a 4; σχεδὸν τἆλλα 6 a 26; ὑπεροχῇ τῶν ἄλλων 4 b 14; 6 b 12-3; ἡ τῶν ἄλλων (sc. ὄρεξις) 8 a 2; τῶν ἄλλων τὰ μαθηματικά 11 b 19
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ἄλογος ἄλογον δόξειεν ἄν 7 a 10

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+ opt. λύοιτ' ἄν 5 a 4; ἂν δέοι 5 b 27; φθείροι ἄν 6 a 14; φθείροιτ' ἄν 6 a 9; ἂν ὑπάρχοι 8 a 15; ἂν εἴη 5 b 2; 6 a 12; 8 a 15; 9 a 20; 10 a 7; δόξειεν ἄν 6 b 12; 7 a 10; 8 a 21; ἂν δόξειεν 9 a 26; 11 b 17; ἀνάψειεν ἄν 7 b 11; λάβοι τις ἄν 10 b 16
ζητήσειεν ἄν τις 5 b 19; 10 b 24; ἄν τις ἐπιζητήσειεν 5 b 10; ἄν τις ἀπορήσειεν 6 a 6; 6 b 24; 7 b 10; ἄν τις ἀξιώσειεν 5 b 15; 6 a 16
οὐ(κ) ἂν εἴη 4 b 23; 5 b 8; 7 b 17; οὐκ ἂν γίνοιτο, 8 a 16; οὐκ ἂν γένοιτο (Eur.) 8 a 26; οὐδ' ἂν προέλοιτο 11 b 10
ὡς ἄν 8 a 5; 9 a 7; ὥσπερ ἂν εἰ 4 b 15
see also ἐάν, κἄν, κεν (s.v.).

ἀνάγειν εἰς τὰς ἀρχάς 6 b 11-2

ἀναγκαῖος πρὸς τὰς ... πραγματείας ἀναγκαῖον 9 b 18

ἀνάγκη ἀνάγκη δ' ἴσως 4 b 13; διαφέρειν ἀνάγκη 8 b 19; τὰ μὲν συμπτωματικῶς

τὰ δ' ἀνάγκῃ τινι 10 a 26; συμπτώματα καὶ δι' ἑτέρας ἀνάγκας 10 b 19; ἀνάγκῃ τινι κατακολουθεῖν 11 b 16

ἀναιρεῖν — ἀναιροῦσιν λόγον 9 b 21-2; ἡ εἰς ἄπειρον ὁδὸς ἀναιροῦσα τὸ φρονεῖν 9 b 5; ἀναιρεῖσθαι τὴν ὅλην οὐσίαν 11 b 11

ἀναλογία — κατ' ἀναλογίαν 4 b 12-3; 8 a 19; 9 a 21; τὸ κατ' ἀναλογίαν 9 a 7; ἀναλογίᾳ (ταὐτό) 9 a 6

ἀναξήρανσις — ἀναξηράνσεις καὶ ὑγρότητες 10 b 2

ἀνάπτειν — τῷ θεῷ τὴν αἰτίαν ἀναπτοῦσιν 11 b 8; εἰς τὰς ἰδέας ἀνάπτων, εἰς τοὺς ἀριθμούς, εἰς τὰς ἀρχάς 6 b 13; ἀνάψειεν ἂν ταῖς ἀρχαῖς 7 b 11; οὐκ ἀνάψει 7 b 13

ἀνάρροια — θαλάττης 10 b 1

ἀναφέρειν — πρὸς αὐτὸν τὸν πρῶτον οὐρανὸν ἀναφέρων 6 a 7

ἄνευ — τῶν ἐναντίων 8 b 5; (τῆς ἀορίστου δυάδος) 11 b 5; οὐκ ἄνευ διαφορᾶς τινος 8 b 16

ἀνήνυτος — τὸ ἀνήνυτον 5 a 17

ἄνθρωπος — ἀνθρώπου ὁ ἀριθμός 6 a 21

ἀντίθεσις — καθάπερ ἀντίθεσίν τινα τῆς ἀορίστου δυάδος καὶ τοῦ ἑνός 11 b 2

ἀντικεῖσθαι — οἷον ἐξ ἀντικειμένων τὴν ἅπασαν οὐσίαν 7 a 9

ἀντιμεταλλακτέον — τὴν ἐνέργειαν 7 b 13-4

ἀξιόπιστος — μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον 7 b 18

ἀξιοῦν — ἀξιοῖ ὁ τοῦτο λέγων 6 a 3; ἄν τις ἀξιώσειεν 5 b 15; 6 a 16

ἀξιόχρεως — οὔθ' ὅλως ἀξιόχρεα τοῦ παντός 4 a 20-1

ἀόρατος — τῷ ἀοράτῳ τὸ ὁρατόν 9 a 23

ἀοριστία — ἐν ἀοριστίᾳ καὶ οἷον ὕλης εἴδει 11 a 20

ἀόριστος — ὂν μέν, ἀόριστον δέ 8 a 12; ἀόριστον τοῖς εἴδεσιν 8 a 18; τὰς ἀρχὰς ἀορίστους εἶναι 7 a 19
ἀόριστος δυάς 6 a 24; 6 a 28 – b 1; 11 b 2-3

ἀπαιτεῖν — ἀφορισμὸν ἀπαιτοῦντα 7 b 7

ἀπαρτίζειν — σύμφωνον ἑαυτῷ καὶ ἀπηρτισμένον 8 a 5

ἅπας — see πᾶς

ἀπάτη — οὐκ ἔστιν ἀπάτη περὶ αὐτά 9 b 16

ἄπαυστος — ἡ κυκλικὴ ἡ συνεχὴς καὶ ἄπαυστος 5 a 4

ἄπειρος — τόπος καὶ κενὸν καὶ ἄπειρον 6 b 1; τὸ ἄπειρον καὶ τὸ ἄτακτον καὶ πᾶσα ὡς εἰπεῖν ἀμορφία 11 b 3; ἄπειρον τὸ ἄψυχον 11 a 16; ἡ εἰς τὸ ἄπειρον ὁδός 9 b 4

ἀπέχειν — ὡς ἂν ἀπέχοντες πλεῖστον 9 a 7-8

ἁπλῶς — ἐξαίρων 5 a 9; ζητοῦσα 8 b 13; ἁπλῶς τῆς φύσεως οἰκεῖον 10 a 9; ἡ μὲν ἡμῖν ἡ δ' ἁπλῶς (sc. ἀρχή) 9 b 7
ἁπλῶς λεγόμενα vs. καθ' ἕκαστον 11 a 4; 11 a 5; ὡς ἁπλῶς εἰπεῖν 4 b 20; οὐκ ἐπὶ πάντων ἁπλῶς θετέον 11 a 3

ἀπό — origin 5 a 3; 5 b 4; 5 b 10; 5 b 26; 6 a 28; 6 b 2
start (ἀπὸ τῶν ἀρχῶν) 6 a 15; 6 a 16; 6 b 22; τὰς ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες 9 b 9

ἀποδιδόναι — τὰ ἐφεξῆς εὐθὺς ἀποδιδόναι 6 a 17-8; τὴν ἐνέργειαν καὶ τὴν οὐσίαν ἀποδιδούς 5 a 8; τὸ οὕτως ἀποδοῦναι 4 b 17; ἀποδοτέον 5 a 10-1

ἀπορεῖν — ἀπορεῖν, εἰ 6 a 13; ἂν τις ἀπορήσειεν ... πότερον ..., ἢ 6 a 6; 6 b 24; ἄν τις τὸ περὶ ... ἀπορήσειεν 7 b 10-1

ἀπορία	ἔχειν ἀπορίαν, τί δή ποτε 8 a 21; ἀπορίαν ἐνεργαζομένη 8 b 13; ἡ νῦν ἀπορία 10 a 20
ἄπορος	ἄπορον πῶς ποτε 5 a 23; ἢ οὐ ῥᾴδιόν γε εἰπεῖν, μέχρι πόσου καὶ τίνων ζητητέον αἰτίας 9 b 2; τὸ μὴ ἔχειν λόγον 10 b 24
ἀπόστασις	μακρὰν τὴν ἀπόστασιν 11 b 1; τὰ μεγέθη καὶ τὰ σχήματα καὶ τὰς ἀποστάσεις 9 b 26
ἀπόφασις	ἐν ὑψηλοτέρῳ τε καὶ ἀληθινωτέρῳ λόγῳ ἡ ἀπόφασις 5 a 13
ἅπτεσθαι	δόξειεν ἂν ἅπτεσθαι τῶν ἄλλων εἰς τὰς ἰδέας ἀνάπτων 6 b 12; αὐτῷ τῷ νῷ θιγόντι καὶ οἷον ἀψαμένῳ 9 b 15
ἀπωθεῖν	οἷον ἀπεωσμένα τῶν ἐντιμοτάτων κατὰ τὰς χώρας, κατὰ τὴν ἐνέργειαν 5 b 21
ἆρα	ἆρ' οὖν 10 a 16
ἄρα	8 b 16; (6 a 17); ὡς ἄρα 10 b 27; εἰ μὴ ἄρα 4 b 10; 5 b 28; 6 a 10; 8 a 22; 11 b 19; καὶ εἰ ἄρα 9 a 6;
ἀργία	ὡς ἀργία καὶ στέρησίς τις κινήσεως 7 b 12
ἀριθμός	αὐτὸς ὁ ἀριθμός 4 b 4; ἀνθρώπου, ἵππου, ἄλλου τινὸς ὁ ἀριθμός 6 a 21-2; μία κατ' ἀριθμόν 4 b 8; ἀριθμῷ (ταὐτό) 9 a 5
	ὅσοι τοὺς ἀριθμοὺς λέγουσιν 5 a 26-7; 5 a 27; τοὺς ἀριθμοὺς γεννήσαντες 6 a 25; ἀπὸ τῶν ἀριθμῶν καὶ τοῦ ἑνός 6 b 2; εἰς τοὺς ἀριθμούς 6 b 14; ἀριθμοῖς γραμμαῖς 8 b 26
ἄριστος	τὴν κρᾶσιν ἀρίστην 11 a 12; εἰς ὄρεξιν τὴν ἀρίστην 5 a 21; οὐ τῆς ἀρίστης (sc. κινήσεως) 5 b 8
	τὸ ἄριστον ἀπὸ τοῦ ἀρίστου 5 b 26-7; ὀρέγεσθαι τοῦ ἀρίστου 11 a 6; ἡ ἔφεσις τοῦ ἀρίστου 5 b 1; τοῦ εἰς τὸ ἄριστον 11 a 2; πάντα τὰ ἄριστα βουλόμενον 6 a 2; εἰς τὸ ἄριστον ἄγειν 11 b 9; ἐν τοῖς ἀρίστοις εἶναι 6 a 4
ἄρρην	τοῖς ἄρρεσιν οἱ μαστοί 10 b 8
ἄρτιος	οἷον ἄρτιος ὁ λόγος 5 a 6
ἄρχεσθαι	πόθεν ἄρξασθαι χρὴ καὶ εἰς ποῖα τελευτᾶν; 10 a 24
ἀρχή	principle 4 b 19; ἡ πάντων ἀρχή 4 b 15; ἀρχὴν μίαν πάντων 5 a 6; ἀρχῆς φύσιν 4 b 9; κινήσεως ἀρχήν 5 a 5
	αἱ ἀρχαὶ πλείους 5 a 19; τὰς ἀρχὰς ἀορίστους εἶναι 7 a 19; πῶς, ποίας τὰς ἀρχάς 6 b 23; τὰς ἀρχὰς ἐναντίας 11 b 7; τὰ ὄντα μόνον περὶ τὰς ἀρχάς 6 b 17; τῶν ἀρχῶν μόνον 6 b 16; τῶν ἀρχῶν ἡ ζήτησις 6 b 21; ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς 4 a 15-6; εἰς τὰς ἀρχὰς ἅπτεσθαι 6 b 12; ἀνάπτειν εἰς τὰς ἀρχάς 6 b 14; ἐν ταῖς ἀρχαῖς 7 a 13; 7 b 9; ἀπὸ τῶν ἀρχῶν 6 b 22; 6 a 16; τὰ μετὰ τὰς ἀρχάς 6 b 19; 7 a 4; ἀνάψειεν ἂν ταῖς ἀρχαῖς 7 b 11-2; κατὰ τὰς ἀρχάς 7 a 6
	first position τὰ ἐν ἀρχῇ 9 a 13
	first question, starting-point ἀρχὴ δέ 4 a 9; ἀρχὴ τῆς τοῦ σύμπαντος θεωρίας 12 a 1; ἡ ἀρχὴ καὶ πρῶτον 9 a 24-5; ἀρχὴ καὶ μέγιστον 9 a 11; ἀρχαὶ τρόπον τινὰ ἄμφω 9 b 6; ἡμετέρα τις ἀρχή vs. τὸ τέλος 9 b 8; ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες 9 b 9
	beginning ἐξ ἀρχῆς 11 b 25
ἀσθένεια	δι' ἀσθένειαν 5 b 14-5; διὰ τὴν ἡμετέραν ἀσθένειαν 9 b 12
ἀστρολογία	(εἰ) ἀστρολογία συνεργεῖ 10 a 5; ὅσα ἀστρολογία δείκνυσιν 9 b 27
ἀστρολόγος	ὁ τῶν ἀστρολόγων (λόγος) 5 a 23
ἀσύνδετος	ἄδεκτόν τι καὶ ἀσύνδετον 5 b 18
ἄτακτος	τὸ ἄπειρον καὶ τὸ ἄτακτον 11 b 4; (ἡ τῆς φύσεως θεωρία) ἀτακτοτέρα 4 a 4

ἄτομος διαίρεσις εἰς τὰ ἄτομα 9 a 3; τὰς μορφὰς οἵας Δημόκριτος ὑποτίθεται τῶν ἀτόμων 11 b 23

ἄτοπος ἄτοπον τὸ μὴ πάντα τὴν αὐτὴν 5 a 18; ἄτοπον τὸ λεχθέν, ὡς 7 b 23; ἄτοπον, εἰ 5 b 14

αὐτόματος τῷ αὐτομάτῳ καὶ τῇ τοῦ ὅλου περιφορᾷ 10 b 27; αὐτομάτως γινομένων 7 a 18

αὐτός τῆς οὐσίας αὐτοῦ 6 a 8; ἔμφυτον αὐτῷ 6 a 10; δι' ἡμᾶς αὐτούς 9 a 8; fem. αὐτήν 4 a 7; 4 a 9; κατ'αὐτήν 8 a 16; αὐτῆς τὸ ἴδιον 4 b 21; περὶ αὐτά 9 b 16; αὐτοῖς 4 b 4; 8 a 2; ἐν αὐτοῖς 8 b 3; ἡ φύσις αὐτῶν 4 a 17; ἡ γένεσις ἢ οὐσία γ' αὐτῶν 8 a 13; αὐτῶν ἡ ἐνέργεια 9 a 4; αὐτῶν ... ἰόντων 5 a 20; ὡς αὐτά 11 a 8

πρὸς αὐτὰ ταῦτα 9 a 25; εἰς αὐτὸ τοῦτο 9 b 16; αὐτὸ τοῦτο ἄπορον 10 b 24; αὐτὰ δι' αὐτῶν 4 a 23; πρὸς αὐτὰ ταῦτα 9 a 25; αὐτῶν τούτων 9 a 13

αὐτῇ γαίῃ ... αὐτῇ τε θαλάσσῃ (Hom.) 5 b 17; ἐν αὐτῇ πομφόλυγι 7 a 22

αὐτὸς ὁ ἀριθμός 4 b 4; αὐτὸν πρῶτον τὸν οὐρανόν 6 a 6; αὐτὸν τὸν νοῦν 7 b 22; αὐτῷ τῷ νῷ 9 b 14; αὐτῷ τῷ ἀγνώστῳ 9 a 22; αὐτοὶ ⟨οἱ⟩ τοὺς ἀριθμούς (sc. λέγοντες) <5 a 27>; αὐτῆς τῆς κινήσεως 6 a 13; αὐτῇ τῇ γῇ 10 b 4; αὐτὸ ⟨τὸ⟩ τοὺς λόγους περιθεῖναι <7 a 20>; αὐτὰ τὰ μαθήματα 9 a 17; αὐτὰ τὰ ἄκρα καὶ πρῶτα 9 b 10; αὐτῶν τῶν ἐμψύχων 11 a 17; αὐτοῖς τοῖς ζῴοις 10 b 7

τὴν αὐτήν 5 a 18; ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν 8 b 24; ταὐτῷ ἐπιστάμεθα (οὐσίᾳ, ἀριθμῷ, εἴδει, γένει, ἀναλογίᾳ) 9 a 4; κατὰ ταὐτά 4 a 6; 10 b 20

ἀφαιρεῖν ἀφελόντα τὴν ὄρεξιν 6 a 12; ἀφαιρεθεῖσα 6 a 13; τὸ διαιρετὸν καὶ μεριστὸν ἀφαιρετέον 5 a 11

ἀφανής οὗ χάριν ἀφανές 5 a 17

ἀφορίζειν πῶς ἀφορίσαι καὶ ποίοις 4 a 2; τὸ ἀφορίσαι τί ... 9 a 25-6; τρόπον τινὰ ἀφωρισμένον 10 a 19

ἀφορισμός ἀφορισμὸν ἀπαιτοῦντα μέχρι πόσου τὸ τεταγμένον 7 b 6; ὑπὲρ τοῦ πάνθ' ἕνεκά του καὶ μηδὲν μάτην ἡ ἀφορισμὸς οὐ ῥᾴδιος 10 a 23

ἄχρι ἄχρι ζῴων καὶ φυτῶν 10 a 5

ἄψυχος ἐν ἀψύχοις καὶ ἐμψύχοις 7 a 17; ἐν τοῖς φυτοῖς καὶ μᾶλλον τοῖς ἀψύχοις 10 b 21; μέχρι ζῴων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων 9 a 15; ἄπειρον τὸ ἄψυχον 11 a 17

βελτίων βέλτιον τὸ εἶναι 11 a 18; ὡς βέλτιον 7 b 11; ὅπου οἷόν τε τὸ βέλτιον 11 a 9; οὔτε τὸ βέλτιον οὔτε τὸ τινὸς χάριν 11 b 15; εἰς τὸ βέλτιον ἡ μετάβασις 8 a 14; τῆς εἰς τὸ βέλτιον ὁρμῆς 11 b 27; σχεδὸν ἰσομοιρεῖ τὸ χεῖρον τῷ βελτίονι 8 a 24

βία βίᾳ ἢ παρὰ φύσιν 10 b 14

βλέπειν ὥσπερ πρὸς τὰ φωτεινότατα βλέπειν 9 b 13

βούλεσθαι πάντα τὰ ἄριστα βουλόμενον 6 a 2

γαίη (Hom.) αὐτῇ γαίῃ 5 b 17

γάρ 4 a 21; 4 b 15; 5 a 10; 5 a 12; 5 b 3; 5 b 8; 5 b 15; 5 b 21; 5 b 24; 6 a 3; 6 a 19; 6 a 21; 6 a 25; 6 b 7; 6 b 17; 6 b 19; 6 b 27; 7 a 9; 7 a 17; 8 b 10; 9 a 1; 9 a 4; 9 a 15; 9 b 4; 9 b 21; 10 a 16; 10 a 28; 10 b 18; 10 b 19; 10 b 24; 11 a 8; 11 a 16; 11 a 22; 12 a 1; εἰ γάρ 8 a 2; εἴ τε γάρ 8 b 17; εἴτε γάρ 5 a 17; εἰ γὰρ καί 11 a 13; 11 b 20; γὰρ δή 4 a 3; 6 a 1; καὶ γὰρ δὴ καί 10 a 7; καὶ

γάρ 5 a 27; τε γάρ 8 b 21; μὲν γάρ 4 a 18; 6 b 21; 7 b 11; οὐ γάρ 5 a 23; 7 b 17; 8 a 16; 9 a 27; οὐδὲ γάρ 4 b 4; οὔτε γάρ 11 b 15; (τιμιώτερον γάρ) 11 a 11

γε — ὅ γε τῶν ἀστρολόγων 5 a 23; οἵ γε πολλοί 6 a 23; τήν γε τάξιν 11 b 18; τό γε κινεῖσθαι 10 a 9; τό γε διὰ τοῦτ' ἠρεμεῖν 7 b 15; τοῦ γ' ἕνεκά του 11 a 1; τοῦτό γε 5 b 14; ἐκεῖνό γε 11 a 14; οὕτω γε 8 a 14; ἁμῶς γέ πως 4 b 12; ἐξ ἐναντίων γε 11 b 12
ἡ γένεσις ἢ οὐσία γε 8 a 13; ἄπορον ἢ οὐ ῥᾴδιόν γε εἰπεῖν 9 b 2
εἴ γε 10 a 17; ἐπεὶ ... γε 11 b 1*; ὥς γε δή τινές φασιν 4 a 4

γένεσις — κατὰ τὴν γένεσιν 6 b 15; τὰς τροφὰς καὶ γενέσεις τῶν ζῴων 10 b 17; καὶ ζῴων καὶ φυτῶν καὶ καρπῶν γενέσεις 7 b 5; φθοραὶ καὶ γενέσεις 10 b 4; ἡ γένεσις ἢ οὐσία γε 8 a 12-3

γεννᾶν — οἷον γεννῶντος τοῦ ἡλίου 7 b 5; τοὺς ἀριθμοὺς γεννήσαντες καὶ τὰ ἐπίπεδα καὶ τὰ σώματα 6 a 25

γένος — κατὰ γένος 4 b 8; καθ' ἕκαστον γένος 9 a 15-6; γένει (ταὐτό) 9 a 5; ἐάν τε γένη τὰ καθόλου ἐάν τ' εἴδη 8 b 20

γῆ — ὅσοι πῦρ καὶ γῆν 6 b 26; τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν 7 b 2; ἐν τοῖς περὶ τὴν γῆν 10 a 28; τὰς τῆς γῆς μεταβολάς 11 b 14; ἐν αὐτῇ τῇ γῇ 10 b 4

γίνεσθαι — μορφάς τε παντοίας καὶ ποικιλίας γίνεσθαι 7 b 1; ἀλλοιώσεις καὶ μεταβολαὶ γίνονται 10 b 5; ἐν ψυχῇ γίνονται 5 b 7
οὐκ ἂν γίνοιτο 8 a 16; οὐκ ἂν γένοιτο (Eur.) 8 a 26; αὐτομάτως γινομένων 7 a 18-9; τὸ μὴ ὂν μηδὲ γεγονὸς μηδὲ μέλλον 8 b 7

γνωστός — γνωστὰ τῷ ἄγνωστα εἶναι 9 a 19

γραμματική — ἐν γραμματικῇ 7 a 2

γραμμή — ἀριθμοῖς γραμμαῖς 8 b 26

δέ — ἀρχὴ δέ 4 a 9; ἡ δ' ἀρχή 9 a 25; ἔτι δέ 5 a 8; 7 a 4; 7 b 22; 9 b 25; 10 b 7; 10 b 11; 10 b 20; τάχα δέ 5 b 10; 5 b 19; 6 a 2; 6 a 16; 6 b 20; 8 b 12; 9 a 21; 9 b 6; 9 b 13; 11 b 10; ἴσως δέ 6 a 12; ἀνάγκη δέ 4 b 13; ἄπορον δέ 5 a 23; ἄλογον δέ 7 a 10; ἄτοπον δέ 7 b 23; χαλεπὸν δέ 7 a 19; χαλεπὴ δέ 9 b 16; χαλεπώτερον δέ 9 a 26; εὐλογώτερον δ' οὖν 4 a 13; 4 b 9; μᾶλλον δ' ἀληθέστερον 9 b 22; μᾶλλον δέ 8 a 25; 11 a 16; ἔτι δέ ... παραδοξότερον 8 b 4; μάλιστα δέ 11 b 17; κατὰ τοὐλάχιστον δέ 7 a 16; ὅλως δέ 8 a 19; 8 b 24; τὸ δ' ὅλον 11 a 18; τὸ ὅλον δέ 4 a 8; σχεδὸν δέ 8 b 20; διὰ πλείστου δέ 9 a 7; πολλὰ δέ 11 b 16; ἕτερα δέ 10 b 6; ἅμα δέ 9 b 22
τοιαύτης δ' οὔσης 4 b 18; πλεοναχῶς δ' ὄντος 9 a 10; ἀπὸ δ' οὖν ταύτης ἢ τούτων τῶν ἀρχῶν 6 a 15; τοιαύτη δέ 5 a 2; ὡσαύτως δέ 6 b 5; 11 a 13; ὡς δ' αὐτά 11 a 7; ὃ δ' ἐξ ἀρχῆς ἐλέχθη 11 b 24; τὸ δὲ μετὰ ταῦτα 5 a 14; τόδε δέ 6 a 5; ταὐτῷ δέ 9 a 4; ἐν δὲ ταῖς ἀρχαῖς 7 b 9; ὑπὲρ δὲ τοῦ ... 10 a 22
Πλάτων δέ 11 a 27; ἔνιοι δέ 6 b 16; ἀρχαὶ δέ 9 b 6; ψυχὴ δέ 5 b 3; χρόνον δέ 6 b 3; πώγωνος δέ 10 b 10; τὸ δὲ κατὰ τὸ πλῆθος 5 a 21; τὸ δὲ ὄν 8 b 10; οἱ δὲ ... χρώμενοι 8 b 6; ἔστιν δέ 8 b 27; ἔχει δέ 9 a 17; συμβαίνει δέ 6 b 18; συνακολουθεῖ δέ 7 a 3; συνάπτει δέ 10 a 19; ἐπιποθεῖ δέ 8 a 8; δοκεῖ δέ 7 b 19; φαίνεται δέ 7 a 1; 11 b 12; πειρᾶται δέ 6 b 9; διῄρηται δέ 9 a 18 δόξειεν δ' ἄν 8 a 21
τίς δ' οὖν 4 b 11; πόσοι δ' οὖν τρόποι 9 a 23; πῶς δέ ποτε 6 b 23; [πόθεν δέ 10 a 24]
εἰ δ' οὖν 4 a 17; 5 b 7; εἰ δέ 4 b 6; 5 a 28; 5 b 26; 7 b 12; 9 a 18; εἰ δὲ μή 4 b 2; 10 a 13; 11 a 1; ἐπεὶ δέ 4 b 22

For δ' οὖν see also s.v. οὖν.
ὅταν δέ 9 b 10; νῦν δέ 6 a 23; ταύτας δέ 6 b 13; ἐκ δὲ τούτων 6 b 14; αὐτὰ δὲ δι' αὐτῶν 4 a 23; τοῦ δ' οὐρανοῦ πέρι 6 b 4; συνεργοῦντα δέ 4 a 12; χωριζόμενος δέ 10 a 15; οὐκ ἐν τοῖς πρώτοις δέ 10 a 6; οὐκ ἐν ἀοριστίᾳ δέ 11 a 20; ἄπειρον δέ 11 a 17; τέλεος δέ 8 b 27; χαλεπὸν δέ 4 b 17; πολὺ δὲ πλῆθος 11 a 19; δυνάμει δ' ὄν 8 a 11; δύναμιν δέ τιν' ἔχον 8 a 19; διαιρέσεως δέ τινος δεῖται 9 a 20
ὁ δὲ τοιοῦτος λόγος 8 a 27; ἡ δὲ φύσις 4 b 20; ἡ δὲ γένεσις 8 a 12; τὴν δὲ κίνησιν 7 b 14; ἡ ὅλη δ' οὐσία 8 a 23; τὰς δ' ἀρχάς 7 a 19; τῶν δὲ περὶ τὸ μέσον 5 b 12
οἱ δέ 6 b 15; ἡ δέ 4 a 5; τὰς δέ 7 a 19; τὸ δέ 8 a 15; τὰ δέ 4 a 15; 11 a 24; τῶν δέ 9 a 2
For μὲν ... δέ see s.v. μέν.
δεικνύναι ὅσα ἀστρολογία δείκνυσιν 9 b 27
δεῖν πῶς δεῖ 4 a 2; ὡς δέον 6 b 26; ἔδει 10 b 19; κάλλιον ἄν τι παρὰ τοῦ πρώτου δέοι 5 b 27; λόγου δεῖται 5 a 14; διαιρέσεως δεῖται 9 a 20-1
δέχεσθαι τῷ μὴ δύνασθαι δέχεσθαι 6 a 1; τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον τὸ εὖ 11 a 15
δή καὶ ... δή 5 b 9; 6 b 4; 6 b 9; 10 a 4; 10 b 16; καὶ δὴ ἔνια 10 a 25; καὶ ὡς ἔνια δή 10 b 14
γὰρ δή 4 a 3; 6 a 1; καὶ γὰρ δὴ καί 10 a 8
μὲν δή 5 a 6; ἀλλὰ δή 11 b 24
ὃν δή 8 a 6; ὅνπερ δή 4 b 5; ὧν δή 7 b 2; ὅθεν δή 7 b 9; διὸ δὴ καί 4 a 6; ὥς γε δή 4 a 4
τί δή ποτε 8 a 22
δῆλος δῆλον ὡς 4 b 21; δῆλον ὅτι 10 a 13
δηλοῦν τοσοῦτο μόνον δηλοῦντες 6 a 28
διά + gen. δι' ἧς ἅπαντα καὶ ἔστιν καὶ διαμένει 4 b 16; δι' ἧς ἐμφαίνεταί τι φῶς 8 b 14; οἷον μεμηχανημένα δι' ἡμῶν 4 a 22; αὐτὰ δι' αὐτῶν 4 a 23
(of media) πάσχειν δι' ἑτέρων 5 b 6
δι' αἰτίου θεωρεῖν 9 b 8; διὰ πλείστου 9 a 7
+ acc. διὰ τὴν ἡμετέραν ἀσθένειαν 9 b 12; 5 b 14; δι' ἑτέρας ἀνάγκας 10 b 19; διὰ τὸ ὑποκείμενον 9 a 9; δι' ἡμᾶς 9 a 8; διὰ τἄμφω 9 a 9; διὰ τοῦτο 7 b 15; διὰ τὸ ποιεῖν καὶ πάσχειν 7 b 21; διὰ τὸ μὴ ἔχειν αἰτίαν 9 b 11; διὰ τί 5 b 11; 7 b 7
διαιρεῖν πειρατέον διελεῖν 9 a 24; διῄρηται ἱκανῶς 9 a 18
διαίρεσις καθ' ὅσα διαίρεσις εἰς τὰ ἄτομα 9 a 2; διαιρέσεώς τινος δεῖται 9 a 20; διαιρέσεις 9 a 6
διαιρετός μὴ διαιρετὸν μηδὲ ποσόν τι λέγων 5 a 8; τὸ διαιρετὸν καὶ μεριστὸν ἀφαιρετέον 5 a 10
διαμένειν δι' ἧς ἅπαντα καὶ ἔστιν καὶ διαμένει 4 b 16
διάνοια ἡ τῆς διανοίας (κίνησις) 5 b 9-10; ὑποβάλλει τῇ διανοίᾳ 8 b 12-3
διατιθέναι διατιθέντα ψήφους 6 a 20; ἅπαντα διατίθησιν περὶ τὸν κόσμον 6 b 7
διαφέρειν διαφέρειν ἀνάγκη 8 b 19
διαφορά εἰ ἕτερα ἀλλήλων διαφορά τις 8 b 17; λαμβάνει τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς 11 a 1; ἔχει διαφοράν 9 a 17; μίκραν τιν' ἢ μηδεμίαν ἔχοντα διαφοράν 6 a 5; ἡ αἴσθησις τὰς διαφορὰς θεωρεῖ 8 b 11; τὸ ἐπίστασθαι οὐκ ἄνευ διαφορᾶς τινος 8 b 16-7
δικνεῖσθαι οὐ δικνουμένου τοῦ πρώτου 5 b 13

διό διὸ δή 4 a 6; διὸ καί 9 b 15; 10 a 10; 11 b 7

διότι equiv. to ὅτι 11 a 14

διστασμός ἔχει τινὰ διστασμόν 11 a 4

διώκειν οὐ τὴν ἠρεμίαν διωκοῦσιν ἀλλὰ τὴν κίνησιν 5 a 24-5

δοκεῖν ὥστε δοκεῖν λέγειν 8 a 25; τῷ μὴ δοκεῖν ἔχειν 10 a 25; ὥσπερ δοκοῦσιν 10 b 22; δοκεῖ 4 a 22; 5 b 3; 7 b 19; δόξειεν ἄν 6 b 12; 7 a 10; 8 a 21; 9 a 26; 11 b 18; τὸ δοκοῦν 8 b 4; τὸ μέγιστον καὶ δὴ καὶ μάλιστα δοκοῦν 10 b 17

δυάς οἱ τὸ ἓν καὶ τὴν ἀόριστον δυάδα ποιοῦντες 6 a 25; καθάπερ ἀντίθεσίν τινα ποιοῦσιν τῆς ἀορίστου δυάδος καὶ τοῦ ἑνός 11 b 3; τὰ μὲν ἀπὸ τῆς ἀορίστου δυάδος, τὰ δ' ἀπὸ τῶν ἀριθμῶν καὶ τοῦ ἑνός 6 b 1

δυναμικός ἀμόρφους καὶ οἷον δυναμικάς 6 b 25

δύναμις δυνάμει τινὶ καὶ ὑπεροχῇ τῶν ἄλλων 4 b 14; δυνάμει κρείττονι καὶ προτέρᾳ 5 a 1; ἀόριστον τοῖς εἴδεσιν, δύναμιν δέ τιν' ἔχον 8 a 19; μὴ ὄν, δυνάμει δ' ὄν 8 a 10-1; ἐν τάξει καὶ λόγῳ, καὶ μορφαῖς καὶ δυνάμεσιν καὶ περιόδοις 7 a 12-3; (φύσιν τινὰ ὡρισμένην) καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν 10 b 23

δύνασθαι τῷ μὴ δύνασθαι δέχεσθαι 5 b 28; κἂν μὴ δύνηται προβαίνειν 8 b 14; μέχρι τινὸς δυνάμεθα 9 b 8; οὐκέτι δυνάμεθα 9 b 11; οὐδὲ τὸν θεὸν δύνασθαι 11 b 8-9

ἐάν 7 b 22; κἂν 8 b 14; ἐάν τε ... ἐάν τε 8 b 19-20

ἑαυτός σύμφωνον ἑαυτῷ 8 a 4-5; καθ' αὑτήν 4 b 22; 11 b 5; καθ' ἑαυτά 8 b 23; αὐτὰ δι' αὑτῶν 4 a 23

ἐγγύς ὁ τοιοῦτος λόγος ἐγγὺς τοῦ ζητεῖν 8 a 27

ἐθέλειν μιμεῖσθαι ἐθέλειν ἅπαντα 11 b 1

εἰ 4 b 11; 5 a 5; 5 b 14; 6 a 13; 7 a 11; 7 a 23; 9 a 23; 10 a 11; 11 b 21; καὶ εἰ 5 b 20; 8 a 20; εἰ δέ 4 b 6; 5 a 28; 7 b 12; εἰ δὲ καί 5 b 26; 9 a 18; εἰ γάρ 8 a 2; εἴ τε γάρ 8 b 17; εἰ γὰρ καί 11 a 13; 11 b 20; εἰ οὖν 10 a 5; εἰ δ'οὖν 4 a 17; 5 b 7; εἰ μὲν γάρ 4 a 18; 7 b 11; εἰ δὲ μή 4 b 2; 10 a 13; 11 a 1; εἰ μή 5 b 1; εἰ μὴ ἄρα 4 b 10; 5 b 28; 6 a 10; 8 a 21; 11 b 19; καὶ εἰ ἄρα 9 a 6; εἴ γε 10 a 16; ὥσπερ ἂν εἰ 4 b 15
see also ἐάν.

εἰδέναι ποσαχῶς τὸ εἰδέναι 9 a 24; (ἀναιροῦσιν) τὸ εἰδέναι 9 b 22

εἶδος κατ' εἶδος 4 b 8; εἴδει (ταὐτό) 9 a 5; οἷον ὕλης εἴδει 11 a 21; ἐάν τε γένη τὰ καθόλου ἐάν τ' εἴδη 8 b 20; καθ' ἕκαστον τῶν εἰδῶν ἢ μερῶν 10 a 4; (φύσιν τινὰ ὡρισμένην) καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν 10 b 23; ἀόριστον τοῖς εἴδεσιν 8 a 18

εἰκῇ (Heracl.) εἰκῇ κεχυμένων 7 a 14; εἰκῇ (sc. λέγουσιν) 11 a 22*

εἰκότως εἰκότως ἄν τις ἀπορήσειεν 7 b 10

εἶναι εἶναι 4 a 22; 4 b 10; 5 b 18; 6 a 4; 7 a 19; 7 b 16; 7 b 21; 8 a 7; 11 a 20*; ἐστίν 4 b 6; 6 a 8; 8 a 23; 8 a 25; ᾖ 8 a 6*
(οὐκ) ἂν εἴη 4 b 23; 5 b 2; 5 b 8; 6 a 12; 7 b 17; 8 a 15; 10 a 7; 10 a 15; 9 a 20; ἦν ἄν 8 b 23
exist. εἶναί τινα συναφήν 4 a 13; ἔστιν καὶ διαμένει 4 b 16; ἔστιν δ' ἔνια, ... 8 b 27; ἔστιν τι ... ἴδιον 9 a 15; οὐκ ἔστιν 9 b 16; 9 b 23; ὄν 8 a 10; ὂν μέν, ἀόριστον δέ 8 a 11; δυνάμει ὂν 8 a 11; μὴ ὄν 8 a 10
οὔσης 4 b 18; οὖσαν 11 b 12; οὖσαι 5 b 6; ὄντος 9 a 10; ὄντα 9 a 18; 11 a 26; ὄντων 5 b 12-3; 8 b 18

	οὐχ οἷόν τε τὸ ὂν ἄνευ τῶν ἐναντίων 8 b 5; τὸ ὂν πολλαχῶς 8 b 10; τὸ μὴ ὂν 8 b 7; τὰ ὄντα 6 b 17; τὰ ὄντα καλῶς ἔτυχεν ὄντα 11 a 25; ἐν τίσιν τὰ ὄντα 12 a 2; τῶν ὄντων 6 a 11; τῶν ὄντων ὁ μερισμὸς εἰς ὕλην καὶ μορφὴν 8 a 9; τὸ εἶναι 11 a 18; τὸ εἶναι ἀληθὲς ὑπάρχοι (κατὰ τὴν ὕλην) 8 a 15; κατὰ πάντων τὸ εἶναι λέγομεν 8 b 2; τὸ μὴ εἶναι 5 a 4; τὸ τί ἦν εἶναι 8 b 22; τῷ ἄγνωστα εἶναι 9 a 19
εἴπερ	5 b 23; 10 b 19; 11 b 10; εἴπερ μή 10 b 9; ἢ εἴπερ 6 a 9; ἀλλ' εἴπερ 7 b 13; 11 b 9; 11 b 16
εἰς	ἰέναι 5 a 20; τελευτᾶν 10 a 24; ὁδός 9 b 4; μεταβολή 5 b 25; μετάβασις 7 b 8; 8 a 14; διαίρεσις 9 a 3; μερισμός 8 a 9; συνέργειν 4 a 12; ἐξαίρειν 5 a 9; ἄγειν 8 a 3; 11 b 9; ἄγεσθαι 8 a 11; ἀνάγειν 6 b 12; ἀνάπτειν 6 b 13 (bis); 6 b 14; προσκαταριθμεῖν 8 b 8 ἡ σύνεσις καὶ ἡ πίστις 9 b 16 (τὸ) εἰς τὸ ἄριστον 11 a 2; τῆς εἰς τὸ βέλτιον ὁρμῆς 11 b 27
εἷς	ἀρχὴν μίαν 5 a 7; πότερον μία τις κατ' ἀριθμὸν ἢ κατ' εἶδος ἢ κατὰ γένος 4 b 7; ἓν τὸ κινοῦν 5 a 18; τὸ ἓν 5 a 26; 5 a 28; 6 a 24; τοῦ ἑνός 6 b 2; 11 b 3
εἶτα	εἶτα κατὰ τὴν γένεσιν 6 b 14
εἴτε	εἴτε ... εἴτε 4 b 12-3; 9 b 11-2; 5 a 17-9
ἐκ	ἐκ (τῶν ἀριθμῶν) 6 b 14; ἐξ ἀντικειμένων 7 a 9; ἐξ ἐναντίων 11 b 11; ἡ ἐξ ἀμφοῖν (sc. ἐπιστήμη) 8 b 27; ὃ ἐξ ἀρχῆς ἐλέχθη 11 b 25
ἕκαστος	ἡ φύσις ἑκάστου 10 a 2; τῆς οὐσίας ἑκάστου 10 a 11; πρὸς ἕκαστον 5 b 4-5; καθ' ἕκαστον 5 a 19; 8 b 22; 10 a 4; ἰδίᾳ πως καθ' ἕκαστον 8 b 26; καὶ ἁπλῶς λεγόμενα καὶ καθ' ἕκαστον 11 a 4-5; καθ' ἕκαστον γένος 9 a 15; τὸ καθ' ἕκαστον 10 a 11-2; ἕκαστα 9 a 10-1; ἕκαστα τῶν μερῶν 7 a 11; τὰς καθ' ἕκαστα πραγματείας 9 b 18; ἑκάστων αἱ φύσεις 7 a 17; ἑκάστοις 7 a 20
ἑκάτερος	ὥσπερ ἑκάτερα κεχωρισμένα, συνεργοῦντα δέ πως 4 a 12
ἑκατέρωθεν	ἄκρα καὶ ἑκατέρωθεν 11 a 25
ἐκεῖνος	κἀκείνοις 7 a 10; ἐκεῖνο 5 a 26; 9 b 13; 11 a 14; κατ' ἐκεῖνο 5 a 4; ἐν ἐκείνοις 6 b 19
ἔκφυσις	πώγωνος ἢ ὅλως τριχῶν ἔκφυσις 10 b 10
ἔλαφος	κεράτων μεγέθη, καθάπερ τῶν ἐλάφων 10 b 12
ἐλάχιστος	κατὰ τοὐλάχιστον 7 a 16
ἔμμορφος	(ἀρχὰς) ἐμμόρφους πάσας 7 a 6; τάς τ' ἐμμόρφους καὶ τὰς τῆς ὕλης 7 a 8
ἐμποιεῖν	ἐμποιῆσαι καθάπερ ζωὴν καὶ κίνησιν (τοῖς τῆς φύσεως) 4 b 3
ἔμπροσθεν	τὸ ἔμπροσθεν 11 a 10
ἐμφαίνειν	τίς αὕτη πειρατέον ἐμφαίνειν 4 b 12; ἐκεῖνο ἐμφαίνει διότι 11 a 14; ἐμφαίνεταί τι φῶς 8 b 15
ἔμψυχος	ἔμψυχ' ἂν εἴη τὰ κινούμενα 5 b 2; ὀλίγον τι τὸ ἔμψυχον 11 a 16; ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις 7 a 17; αὐτῶν τῶν ἐμψύχων ἀκαριαῖον τὸ εἶναι 11 a 17
ἐν	ἐν τίνι 9 b 19; ἔν τισιν τόποις 10 b 10; ἐν ἄλλοις 11 b 17; ἐν τῷ ἀέρι 11 b 17; ἐν αὐτῇ τῇ γῇ 10 b 4; ἐν τῷ μὴ φωτί 8 b 15; ἐν τῇ μέσῃ κοιλίᾳ τῆς καρδίας 11 a 11; ἐν ψυχῇ 5 b 6; ἐν τῷ Τιμαίῳ 6 b 27 ἐν αἷς (sc. ὥραις) 7 b 4 in the case of, where ... is concerned ἐν τῇ τοῦ σύμπαντος οὐσίᾳ 11 b 26; ἐν τῇ φύσει 11 b 26; ἐν ἅπασιν 7 a 21; 11 a 5; ἐν ἀμφοῖν 9 b 5; ἐν πλείοσιν 8 b 24; ἐν ἐκείνοις 6 b 19; ἐν τούτοις 11 b 21; ἐν αὐτοῖς 8 b 4; ἐν

ἑτέροις 10 b 25; ἐν τοῖς πλεοναχῶς λεγομένοις 9 a 27; ἐν ταῖς ἀρχαῖς 7 a 13; 7 b 9; ἐν ᾗ (sc. ἀορίστῳ δυάδι) 11 b 3; ἐν τοῖς πρώτοις 11 b 13; ἐν τοῖς πρώτοις τῆς φύσεως 10 a 6; ἐν τοῖς καθόλου 8 b 18; ἐν τοῖς μαθηματικοῖς 9 a 16; ἐν τοῖς αἰσθητοῖς καὶ νοητοῖς 9 b 3; ἐν τοῖς αἰσθητοῖς 7 b 15; 9 b 3; ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις 10 a 18; ἐν τοῖς οὐρανίοις 10 a 27; ἐν τοῖς περὶ τὴν γῆν 10 a 27; ἐν τοῖς ζῴοις 10 a 17; ἐν αὐτοῖς τοῖς ζῴοις 10 b 7; ἐν ζῴοις καὶ φυτοῖς 7 a 21; 10 a 12; ἐν τοῖς φυτοῖς 10 b 20; ἐν αὐτῇ πομφόλυγι 7 a 22; ἐν ἀψύχοις καὶ ἐμψύχοις 7 a 17; ἐν τοῖς πρακτοῖς καὶ ποιητοῖς 9 a 3

ἐν ταῖς ἄλλαις μεθόδοις 6 b 18; ἐν ταῖς λοιπαῖς (sc. ἐπιστήμαις) 6 b 21; 7 a 1; ἐν ταῖς τέχναις 8 a 12; ἐν γραμματικῇ καὶ μουσικῇ καὶ ταῖς μαθηματικαῖς 7 a 2

be found, consist in ἐν τίσιν τὰ ὄντα 12 a 1; ἐν ποίοις 4 a 17; ἐν τῷ πρώτῳ 4 b 10; ἐν τοῖς ἀρίστοις 6 a 4; ἐν τοῖς μαθηματικοῖς 4 a 18; ἐν ἐναντίοις 8 a 23; <11 b 12>; ἐν ἀμφοῖν 7 a 8; ἐν τούτοις 6 b 16; ἐν ὀλίγοις 4 b 9; 11 a 19; ἐν τούτῳ 9 a 1; ἐν τῷ πάσχειν 5 b 6; ἐν ἀοριστίᾳ 11 a 20

belong to ἐν ὑψηλοτέρῳ τε καὶ ἀληθινωτέρῳ λόγῳ 5 a 12; ἐν νοητοῖς, οὐκ αἰσθητοῖς τιθέασιν (sc. τὴν τῶν πρώτων θεωρίαν) 4 a 6

circumstance, situation ἐν κινήσει 4 b 20; ἐν τῇ περιφορᾷ 10 a 14; ἐν τάξει καὶ λόγῳ 7 a 12; ἐν τῷ ἀνάγειν 6 b 11; τὰ ἐν ἀρχῇ 9 a 13; τὸ ἐν μέρει 9 a 2

ἐναντίος — τοὐναντίον 6 b 18; τὰς ἀρχὰς ἐναντίας 11 b 7; τὴν ὅλην οὐσίαν ἐξ ἐναντίων καὶ ⟨ἐν⟩ ἐναντίοις οὖσαν 11 b 11-2; ἡ ὅλη οὐσία τοῦ παντὸς ἐν ἐναντίοις ἐστίν 8 a 23; οὐχ οἷόν τε τὸ ὂν ἄνευ τῶν ἐναντίων 8 b 5

ἐνδέχεσθαι — ἐφ' ὧν ἐνδέχεται 9 a 21; 11 a 6; ἐφ' ὅσον ἐνδέχεται 11 b 10; ἐνδεχόμενον 7 b 20

ἕνεκα — τίνος ἕνεκα 10 a 28; 10 b 23; τὸ τίνος ἕνεκα 10 a 1; τὸ ἕνεκά του 7 a 21; 11 a 1; 11 b 27; τὸ πάνθ' ἕνεκά του 10 a 22; οὐθενὸς ἕνεκα 10 b 18

ἐνεργάζεσθαι — ἀπορίαν ἐνεργαζομένη (sc. ἐν τῇ διανοίᾳ) 8 b 14

ἐνέργεια — τὴν ἐνέργειαν καὶ τὴν οὐσίαν 5 a 7; ἐνέργεια τῆς οὐσίας ἑκάστου 10 a 11; τὴν ἐνέργειαν ἀντιμεταλλακτέον (opp. ἠρεμία) 7 b 13; ἀγόμενον εἰς ἐνέργειαν 8 a 11; ἀπεωσμένα κατὰ τὴν ἐνέργειαν 5 b 23; οὕτως αὐτῶν ἡ ἐνέργεια 9 a 4

ἐνεργεῖν — τὸ καθ' ἕκαστον ὅταν ἐνεργεῖ καὶ κινεῖται 10 a 12

ἔνθα — ἔνθα μὲν ..., ἐν δὲ ταῖς λοιπαῖς (ἐπιστήμαις) 6 b 21

ἔνιος — ἔνιοι 6 b 16; ἐνίοις 10 b 10; ἔστιν δ' ἔνια 9 a 1; καὶ δὴ ἔνια 10 a 25; καὶ ὡς ἔνια δή 10 b 13; εἰ δὲ καὶ ἔνια 9 a 18

ἐνταῦθα — ἐνταῦθά που ζητεῖ τὴν σκέψιν 7 b 6; ὅπου οἷόν τε, ἐνταῦθα οὐδαμοῦ παραλείπει 11 a 9

ἔντιμος — ἀπεωσμένα τῶν ἐντιμοτάτων 5 b 22

ἐξαίρειν — ἁπλῶς ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν 5 a 9

ἔοικεν — ἔοικεν ὁ λόγος ἔχειν τι πιστόν 10 b 26

ἐπεί — ἐπεὶ δέ 4 b 22; ἐπεὶ καί 5 b 5; 9 b 17; 11 a 3; ἐπεὶ ... γε 7 b 15; 11 b 1*

ἐπειδή — ἐπειδὴ πλείω τὰ κυκλικά 5 a 15

ἐπείπερ — ἐπείπερ συνάπτει τοῖς αἰσθητοῖς 4 b 19

ἐπεισοδιώδης — μὴ ἐπεισοδιῶδες τὸ πᾶν 4 a 14

ἕπεσθαι — τὰ ἐν ἀρχῇ καὶ ⟨τὰ⟩ ἑπόμενα 9 a 14

ἐπί — + gen. ἐπὶ τῶν ζῴων ὁμοίως 11 a 8; οὐκ ἐπὶ πάντων ἁπλῶς θετέον 11 a 3; ἐφ' ὧν ἐνδέχεται 9 a 21; 11 a 6

+ acc. ἐπ' αὐτὰ τὰ ἄκρα καὶ πρῶτα μεταβαίνωμεν 9 b 10; ἐάν τις ἄγῃ (sc.

	the question) ἐπ' αὐτὸν τὸν νοῦν καὶ τὸν θεόν 7 b 22; ἐφ' ὅσον ἐνδέχεται 11 b 9
	with reference to κατ' ἀναλογίαν ληπτέον ἐπὶ τὰς τέχνας 8 a 20
	ἐπὶ πλέον 8 b 16
ἐπιζητεῖν	ἄν τις ἐπιζητήσειεν, διὰ τί ... 5 b 11
ἐπιθεωρεῖσθαι	ἐπιθεωρούμενα 11 b 13
ἐπιμιμεῖσθαι	[11 b 1]
ἐπίπεδον	τοὺς ἀριθμοὺς γεννήσαντες καὶ τὰ ἐπίπεδα καὶ τὰ σώματα 6 a 26
ἐπιποθεῖν	ἐπιποθεῖ τινα λόγον 8 a 8
ἐπιπρόσθησις	(λελωβημένων) ἐπιπροσθήσει τῶν ὀμμάτων 10 b 13
ἐπίστασθαι	τί τὸ ἐπίστασθαι 9 a 26; πλεοναχῶς ὄντος τοῦ ἐπίστασθαι 9 a 10; τὸ ἐπίστασθαι οὐκ ἄνευ διαφορᾶς τινος 8 b 16; ταὐτῷ ἐπιστάμεθα 9 a 4-5
ἐπιστήμη	σχεδὸν ἐπιστήμη πᾶσα τῶν ἰδίων 8 b 20-1; ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν ἐπιστήμης 8 b 25; τὰ μετὰ τὰς ἀρχὰς ἰσχυρότερα καὶ οἷον τελεώτερα τῶν ἐπιστήμων 6 b 20
ἐρύειν	(Hom.) κεν ... ἐρύσαιμ' 5 b 17
ἐρῳδιός	ὥσπερ ὁ ἐρῳδιὸς ὀχεύει 10 b 14
ἐσθλός	οὐκ ἂν γένοιτο χωρὶς ἐσθλά (Euripides) 8 a 27
ἔσχατος	μέχρι ζῴων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων 9 a 14-5
ἕτερος	ἑτέρα τις οὐσία 4 b 6; δι' ἑτέρας ἀνάγκας 10 b 19; ὑπερέχειν τῆς ἑτέρας 11 b 6-7; ἕτερον εἶναι 7 b 21; καθ' ἕκαστον ἕτερον 5 a 19; τὸ ἕτερον λεχθέν 7 b 23
	ἕτερα καὶ πρότερα 10 a 7; ἕτερα ἀλλήλων 8 b 17; ἐν ἑτέροις 10 b 25; πάσχειν δι' ἑτέρων 5 b 6; τῇ ἑτέρων τάξει καὶ μεταβολῇ 7 a 23; ἑτέρων λόγων 6 a 15
	καὶ ἕτερα οὐκ ὀλίγα τοιαῦτα 10 b 15; καὶ ἕτερα οὐκ ὀλίγα παρόμοια τούτοις 10 b 6; καὶ ἕτερα δὴ πλείω 6 b 4
ἐτήσιος	τὰ περὶ τὰς ὥρας τὰς ἐτησίους 7 b 3-4
ἔτι	οὐδεμίαν ἔτι ποιοῦνται μνείαν 6 b 5; ἔτι δέ 5 a 8; 7 b 22; 9 b 25; 10 b 7; 10 b 11; 10 b 20; ἔτι δὲ καί 7 a 4; καὶ ἔτι δή 6 b 9
	ἔτι παραδοξότερον 8 b 4; ἔτι πλέονι 8 b 6; τὰς ἔτι προτέρας 9 b 20
εὖ	οὐ δεχόμενον τὸ εὖ 11 a 15
εὐθύς	τὰ ἐφεξῆς εὐθὺς ἀποδιδόναι 6 a 17
εὔλογος	τάχα δὲ καὶ εὐλόγως 6 b 21; εὐλογώτερον δ' οὖν 4 a 13; 4 b 8
εὔσημος	οὔτ' ἄγαν εὔσημος ἡ συναφή 4 a 19-20
ἐφάπτεσθαι	σχεδὸν τἆλλα παραλείπουσιν πλὴν ὅσον ἐφαπτόμενοι 6 a 27
ἐφεξῆς	ἀπὸ ταύτης ἢ τούτων τῶν ἀρχῶν τὰ ἐφεξῆς εὐθὺς ἀποδιδόναι 6 a 17
ἔφεσις	περὶ τῆς ἐφέσεως, ποία καὶ τίνων 5 a 15; ἡ ἔφεσις τοῦ ἀρίστου 5 a 28; ἐφέσει τινι καὶ ὀρέξει 6 a 9
ἐφετικός	τὰ κυκλικὰ μόνον ἐφετικά 5 b 11
ἔφοδος	αἱ ἔφοδοι καὶ ἀνάρροιαι θαλάττης 10 a 28 – b 1
ἔχειν	διαφοράν 6 a 5; 9 a 16; διστασμόν 11 a 3; μεταβολάς 4 a 5; δύναμιν 8 a 19; τὸ μὴ ἔχειν αἰτίαν 9 b 11-2; τὸ μὴ ἔχειν λόγον 10 b 24; τάξιν 11 b 18; ὄρεξιν 5 a 24; φύσιν 10 b 22; οὐδεμίαν ἔχειν φύσιν 4 b 2; ἀρχῆς φύσιν ἐχούσας 4 b 9; τοῖς ἔχουσιν (sc. ψυχήν) 5 b 4; δόξειεν δ' ἂν καὶ τοῦτ' ἔχειν ἀπορίαν 8 a 21; ἔοικεν ὁ λόγος ἔχειν τι πιστόν 10 b 26
	πῶς ἔχει 5 b 19; πῶς ἔχει πρὸς ἄλληλα 12 a 2; ἔχειν οὕτω(ς) 7 a 1; 10 a 25

ζῆν	(ὥσπερ) τὸ ἡμερόβιον ζῇ 10 b 15
ζητεῖν	ἡ αἴσθησις τὰς αἰτίας ζητεῖ 8 b 11-2; ζητήσειεν ἄν τις 5 b 19; 10 b 23-4; ὁ τοιοῦτος λόγος ἐγγὺς τοῦ ζητεῖν ὅτι ... 8 b 1; περιεργίαν τοῦ ζητεῖν 8 a 22; ἁπλῶς ζητοῦσα 8 b 13; ζητούντων ἐπὶ πλέον 8 b 15-6 ζητοῦντες λόγον 9 b 21; ζητοῦσιν (λόγον) 9 b 23; μείζονα ζητεῖ λόγον 5 a 22; μείζω τινὰ αἰτίαν ζητεῖ 7 b 19; ζητεῖ τὴν σκέψιν 7 b 6 ζητητέον αἰτίας 9 b 3; ἐν τοῖς ζῴοις τὴν ζωήν 10 a 17
ζήτησις	τῶν ἀρχῶν, ἀπὸ τῶν ἀρχῶν ἡ ζήτησις 6 b 22
ζωή	ζωὴν καὶ κίνησιν 4 b 3; (ψυχὴ) ζωὴ τοῖς ἔχουσιν 5 b 3; (εἰ μὴ) ἐν τοῖς ζῴοις τὴν ζωὴν ᾗ ὡδὶ ζητητέον 10 a 17; οἷον ζωή τις ἡ περιφορὰ τοῦ παντός 10 a 16
ζῷον	ὡς ἂν πόλις ἢ ζῷον ἢ ἄλλο τι τῶν μεριστῶν 8 a 5; ὥσπερ καὶ τοῖς ζῴοις 5 b 5; (οἷον) ζῴοις φυτοῖς 8 b 27; καὶ ἐν ζῴοις καὶ φυτοῖς 7 a 22; καθάπερ ἐν τοῖς ζῴοις καὶ φυτοῖς 10 a 12-3; μηδ' ἐν τοῖς ζῴοις 10 a 17; ἐν αὐτοῖς τοῖς ζῴοις 10 b 7; ἐπὶ τῶν ζῴων 11 a 8; μέχρι ζῴων 9 a 14; ἄχρι ζῴων 10 a 5; (τῶν) ζῴων γενέσεις 7 b 4; 10 b 17-8
ἤ	different options ἢ ... ἢ 4 b 8; 8 a 5; ἤτοι ... ἢ 8 b 26 For πότερον/πότερα ... ἢ see πότερος s.v. alternative added ἡ μὲν ἡμῖν ἡ δ' ἁπλῶς, ἢ τὸ μὲν τέλος ἡ δ' ἡμετέρα τις ἀρχή 9 b 7; σαφεστέρως ἢ πειστικωτέρως 4 b 18; βίᾳ ἢ παρὰ φύσιν 10 b 14; ἀπὸ ταύτης ἢ τούτων τῶν ἀρχῶν 6 a 15; πώγωνος ἢ ὅλως τριχῶν ἔκφυσις 10 b 10; μικράν τιν' ἢ μηδεμίαν διαφοράν 6 a 5; οὐ φυσικὸς (ἢ οὐ πᾶς) 10 a 8; ἡ γένεσις ἢ οὐσία γε 8 a 13; ἄπορον ἢ οὐ ῥᾴδιόν γε εἰπεῖν 9 b 2; ἰσομοιρεῖν ἢ καὶ ὑπερέχειν 11 b 6 or, i.e. which amounts to τῶν εἰδῶν ἢ μερῶν 10 a 4; τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς 10 b 28; κατ' ἀναλογίαν .., ἢ αὐτῷ τῷ ἀγνώστῳ 9 a 22 next item 10 b 1; 10 b 2 after negat. μηδ' ... ἢ ὡδί 10 a 17; οὐδ' ... ἢ τρόπον τινά 10 a 19; τὸ μὴ εἶναι ... ἢ εἰ 5 a 5; τοὐναντίον ἤ 6 b 18; ἀδύνατον ἤ 7 b 8 compar. μᾶλλον ... ἢ 5 a 11
ἤδη	ἤδη λόγου δεῖται 5 a 14
ᾗ	ᾗ ... γίνονται 10 b 4*; ᾗ καί 9 b 1; 10 b 26; 11 b 7
ἥλιος	οἷον γεννῶντος τοῦ ἡλίου 7 b 5
ἡμεῖς	μεμηχανημένα δι' ἡμῶν 4 a 22; τὰ μὲν δι' ἡμᾶς αὐτούς, τὰ δὲ διὰ τὸ ὑποκείμενον 9 a 8; ἡ μὲν ἡμῖν ἡ δ' ἁπλῶς 9 b 7
ἡμερόβιον	(ὥσπερ) τὸ ἡμερόβιον ζῇ 10 b 15
ἡμέτερος	τὴν ἡμετέραν ἀσθένειαν 9 b 12; τὸ μὲν τέλος ἡ δ' ἡμετέρα τις ἀρχή 9 b 7
ἠρεμεῖν	τὸ διὰ τοῦτ' ἠρεμεῖν ὡς ... 7 b 16; ἠρεμῶν ὁμώνυμος 10 a 15; οὐ μιμοῦνται τοῦ ἠρεμοῦντος τὰ ὀρεγόμενα 8 a 1-2
ἠρεμία	οὐ τὴν ἠρεμίαν διώκουσιν ἀλλὰ τὴν κίνησιν 5 a 24; τὸ περὶ τῆς ἠρεμίας 7 b 10
ἤτοι	ἤτοι ... ἢ 8 b 25
ἥττων	οὐθὲν ἧττον 8 a 16
θάλασσα	(Hom.) αὐτῇ ... θαλάσσῃ 5 b 17
θάλαττα	αἱ ἔφοδοι καὶ ἀνάρροιαι θαλάττης 10 b 1

θεῖος θεία ἡ πάντων ἀρχή 4 b 15; τὰ θεῖα 6 b 9; εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν 5 a 10; τὸ πρῶτον καὶ θειότατον 6 a 1

θεός τὸν νοῦν καὶ τὸν θεόν 7 b 23; οὐδὲ τὸν θεὸν (δύνασθαι) 11 b 8; ὥσπερ ἂν εἰ τὸν θεόν 4 b 15; ὅσοι τῷ θεῷ τὴν αἰτίαν ἀνάπτουσιν 11 b 8

θέσις ἡ πρὸς ἄλληλα θέσις 10 a 3

θεωρεῖν ἡ αἴσθησις τὰς διαφορὰς θεωρεῖ 8 b 11; δι' αἰτίου θεωρεῖν 9 b 9; τὰ θεωρούμενα καθ' ἑαυτά 8 b 22

θεωρία τῆς τοῦ σύμπαντος θεωρίας 12 a 1; τῶν τοιούτων ἡ θεωρία 9 b 14-5; cp. ἡ τῆς φύσεως (sc. θεωρία) 4 a 3, ἡ τῶν πρώτων (sc. θεωρία) 4 a 5
τὴν ὑπὲρ τῶν πρώτων θεωρίαν 4 a 3

θῆλυς τοῖς θήλεσιν ἡ πρόεσις 10 b 9

θιγγάνειν αὐτῷ τῷ νῷ τῶν τοιούτων ἡ θεωρία θιγόντι καὶ οἷον ἀψαμένῳ 9 b 15

θρίξ τριχῶν ἔκφυσις 10 b 10

ἰδέα εἰς τὰς ἰδέας ἀνάπτων 6 b 13; λαμβάνει τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς 10 b 28

ἴδιος ἴδιος ὁ τρόπος 9 a 20; ἔστιν τι καθ' ἕκαστον γένος ἴδιον 9 a 16; ἥ τε οὐσία καὶ τὸ τί ἦν εἶναι καθ' ἕκαστον ἴδιον 8 b 22; ἰδίᾳ πως καθ' ἕκαστον 8 b 26; τὸ ἴδιον 4 b 21; τῶν ἰδίων 8 b 21

ἰέναι εἰς ὄρεξιν ἰόντων 5 a 20; μέχρι τινὸς ἐλθόντες 6 a 23

ἱκανῶς διῄρηται ἱκανῶς 9 a 18

ἵππος ἵππου (sc. ὁ ἀριθμός) 6 a 22

ἰσομοιρεῖν οἷον ἰσομοιρεῖν ἢ καὶ ὑπερέχειν 11 b 6; σχεδὸν ἰσομοιρεῖ τὸ χεῖρον τῷ βελτίονι 8 a 24

ἰσχυρός ἰσχυρότερον 5 b 15; τὰ μετὰ τὰς ἀρχὰς ἰσχυρότερα 6 b 19

ἴσως 6 a 6; ἴσως δέ 6 a 12; ἀνάγκη δ' ἴσως 4 b 13; πλὴν ἴσως 8 a 3

καθάπερ 8 b 3; 10 b 8; 10 b 11; 11 a 21; καθάπερ ἐν ... 7 a 2; 8 a 12; 9 a 3; 10 a 12; 10 a 27; καθάπερ καί 6 a 24; καθάπερ εἴ τις 9 a 22; καθάπερ ἐν τῷ Τιμαίῳ φησίν 6 b 27; καθάπερ τινές φασιν 4 a 19; 9 a 19; καθάπερ πλεονάκις λέγεται 10 a 23
adv. 4 b 3; 11 b 2

καθόλου καθόλου λέγειν 8 a 26; ἤτοι κοινῇ καὶ καθόλου λεγόμενον ἢ ἰδίᾳ πως καθ' ἕκαστον 8 b 25; καθόλου καὶ κοινόν τι λαβεῖν 9 a 27; καθόλου τέλος 9 a 1
ἐάν τε γένη τὰ καθόλου ἐάν τ' εἴδη 8 b 20; ἐν τοῖς καθόλου 8 b 18; τῶν ὑπὸ τὰ καθόλου 8 b 19;

καί conn. 4 a 2; 4 a 4; 4 a 6^{1}; 4 a 8^{1,3}; 4 a 10; 4 a 14; 4 a 17; 4 b 4; 4 b 5; 4 b 6; 4 b 10^{1,3}; 4 b 11; 4 b 14; 5 a 2; 5 a 3; 5 a 10; 5 a 11; 5 a 15; 5 b 2; 5 b 3; 5 b 9; 5 b 18; 6 a 1; 6 a 3; 6 a 4; 6 a 9; 6 a 19; 6 a 24^{2}; 6 a 26^{1,2}; 6 b 1^{1,2}; 6 b 2; 6 b 3^{1,2}; 6 b 4; 6 b 8^{1,2}; 6 b 20^{1}; 6 b 23; 6 b 25^{1,2}; 6 b 28; 7 a 2^{1,2}; 7 a 11; 7 a 12^{1}; 7 a 17; 7 a 23; 7 b 2; 7 b 12; 7 b 14; 7 b 22; 7 b 23^{1}; 8 a 5; 8 a 9; 8 a 11; 8 b 3; 8 b 25; 9 a 3; 9 a 11; 9 a 12^{1,2}; 9 a 13; 9 a 14^{1,2,3}; 9 a 24; 9 a 25; 9 a 27; 9 b 2; 9 b 5; 9 b 10; 9 b 15; 9 b 17^{1}; 9 b 18; 9 b 20; 9 b 25; 9 b 26^{1,2,3}; 10 a 2^{1,2}; 10 a 3^{1}; 10 a 5; 10 a 7^{1}; 10 a 13; 10 a 18; 10 a 22; 10 b 1; 10 b 2; 10 b 3^{2}; 10 b 4; 10 b 5; 10 b 8;10 b 15^{1,2}; 10 b 16^{2}; 10 b 17; 10 b 19; 10 b 20; 10 b 26^{1}; 11 a 1; 11 a 7; 11 a 18; 11 a 19; 11 a 20; 11 a 25; 11 b 3^{1}; 11 b 12; καὶ ἄλλως 7 b 18; καὶ μᾶλλον 10 b 21; καὶ μάλιστα 9 b 19; 10 a 10; καὶ ὅλως 10 b 3

τὸ κινοῦν ἕτερον εἶναι καὶ ὃ κινεῖ 7 b 21
4 a 15; 4 b 20; 5 a 16; 5 a 17[1,2]; 5 b 20; 6 a 8; 6 a 11; 6 a 18; 6 a 27; 7 b 7; 8 a 24; 8 b 2; 8 b 6; 10 a 11; 10 a 24; 10 b 27; 11 a 2; 11 a 6; 11 a 11; 11 a 17; 12 a 2; καὶ ἕτερα 10 b 6; 10 b 15; καὶ ταῦτα 10 b 25
καὶ .... καὶ ... (καί) 4 b 16; 5 a 7; 5 b 25; 7 a 5; 7 a 12-3; 7 a 21-2; 7 b 4; 8 b 11; 9 a 5-6; 10 a 9-10; 10 b 22-3; 11 a 4; 11 b 3-4; 11 b 17; 11 b 25-6; 11 b 26-7; ἅμα ... καί 5 b 3; καὶ εἰ 8 a 20; καὶ εἰ ἄρα 9 a 6; καὶ ... δέ 4 a 8[2]; 7 a 15; 8 a 23; 10 b 6; 10 b 10; καὶ (...) δή 5 b 9[1]; 6 b 3[3]; 6 b 9[1]; 10 a 3[2]; 10 a 25; 10 b 13[2]; 10 b 16[1]; καὶ ... μέν 6 a 14; 7 b 5
For τε (...) καί see τε s.v.
οὐ μόνον ... ἀλλὰ καί 5 b 22; ἢ καί 11 b 6; ἐπεὶ καί 5 b 5; 9 b 17; 11 a 3; δὲ καί 5 a 23; 5 b 10; 6 a 16; 6 b 9[2]; 6 b 16; 6 b 20; 7 a 1; 7 a 3; 7 a 4; 7 a 10; 7 b 19; 7 b 23[2]; 8 a 25[1]; 8 b 20; 9 a 17; 9 b 16; 9 b 22; 10 a 15; 11 a 13; 11 a 27; 11 b 13[1]; 11 b 17; δὲ ... καί 8 a 8; 11 a 8; εἰ δὲ καί 5 b 26; 9 a 18; καὶ γάρ 5 a 27; καὶ γὰρ δὴ καί 10 a 7-8; εἰ γὰρ καί 11 a 13; 11 b 20; εἰ μὴ ἄρα καί 4 b 10[2]; 11 b 19; ἐπεὶ καί 11 a 3; κἄν 8 b 14; 10 a 14
καὶ ὁ ὅλος οὐρανός 8 a 6; καὶ τοῦτο 5 b 10; 8 a 21; καὶ τὸ περὶ ... 7 b 10; καὶ Εὐριπίδην 8 a 25; καὶ ταῦτα 8 b 19; καὶ ἀφέλοντα 6 a 12; καὶ λελωβημένων 10 b 12; καὶ κινεῖται 10 a 12; καὶ ὡς ἔτυχεν 11 b 13; συνάπτει καὶ πρὸς ... 10 a 20
ἀφ' ἧς καί 5 b 4; 5 b 10; ὅθεν δὴ καί 7 b 9; ἐν ᾗ καί 11 b 3; ἐν αἷς καί 7 b 4; ὥσπερ καί 4 a 16; 5 b 5; 9 a 16; 11 b 3; καθάπερ καί 6 a 24; διὸ (δὴ) καί 4 a 6[2]; 9 b 15; 10 a 10; 11 b 7; ᾗ καί 8 a 6; 9 b 1; 10 b 26; 11 b 7

καίπερ — καίπερ ἐν τῷ πάσχειν οὖσαι 5 b 6; καίπερ ὁμογενῆ πως ὄντα 9 a 17; καίπερ κινητῶν ὄντων 5 b 12; καίπερ αὐτομάτως γινομένων 7 a 18

καίτοι — 10 a 9; 11 b 2

κακός — πολὺ πλῆθος εἶναι τὸ κακόν 11 a 20

καλός — καλῶς ἔτυχεν ὄντα 11 a 25; κάλλιον ... τι 5 b 27; ὁ κάλλιστος (Heracl.) 7 a 15

κἄν — (= καὶ ἐάν) κἂν μὴ δύνηται 8 b 14; (= καὶ ἄν) κἂν εἴη 10 a 14

καρδία — ἐν τῇ μέσῃ κοιλίᾳ τῆς καρδίας 11 a 11

καρπός — καρπῶν γενέσεις 7 b 4

κατά — κατ' ἐκεῖνο 5 a 4; κατ' αὐτήν 8 a 16; κατὰ ταὐτά 4 a 6; 10 b 20; κατὰ τοὺς λόγους 8 a 13; κατὰ τὰς ἀρχάς 7 a 6; κατὰ τὰς τέχνας 7 a 4; κατὰ τὰς χώρας 5 b 22; κατὰ τὴν οὐσίαν 10 a 14; κατὰ τὴν ἐνέργειαν 5 b 23; κατὰ τὴν γένεσιν 6 b 14; καθ' ἕκαστον 5 a 19; 8 b 22; 8 b 26; 9 a 15; 10 a 11-2; 11 a 4; καθ' ἕκαστον τῶν εἰδῶν ἢ μερῶν 10 a 4; καθ' ἕκαστα 9 b 18; καθ' ὅσα 9 a 2; τὸ κατὰ τὸ πλῆθος 5 a 21; τὰ κατὰ τὰς φοράς 9 b 25
κατ' ἀριθμόν 4 b 7; κατὰ γένος 4 b 8; κατ' εἶδος 4 b 8; κατ' ἀναλογίαν 4 b 12; 8 a 19; 9 a 21; τὸ κατ' ἀναλογίαν 9 a 7; κατ' ἄλλην ὁμοίωσιν 4 b 13; καθ' ὁμοιότητα καὶ μεταφοράν 5 b 1
κατὰ συμβεβηκός 5 b 24; 6 a 9; καθ' ἑαυτὰ καὶ οὐ κατὰ συμβεβηκός 8 b 23; καθ' ἑαυτά 8 b 23; καθ' αὑτήν 4 b 22; 11 b 4; κατὰ τοὐλάχιστον 7 a 16
+ gen. ἦν ἄν τι κατά τινος 8 b 23; κατὰ πάντων τὸ εἶναι λέγομεν 8 b 2

κατακολουθεῖν — ἀνάγκῃ τινι 11 b 16

κατάλοιπος — τούτοις κατάλοιπον λέγειν 9 b 27- 10 a 1

καταπαύεσθαι — μέχρι τινὸς ἐλθόντες καταπαύονται 6 a 23-4

κεν — (Hom.) 5 b 17

κενός	τόπος καὶ κενὸν καὶ ἄπειρον 6 b 1
κέρας	κεράτων μεγέθη 10 b 11
κίνδυνος	κίνδυνος μὴ λογῶδες 7 b 17
κινεῖν	ὃ κινεῖ 7 b 21; κινήσει 5 a 5; τὸ κινοῦν 5 a 18; 7 b 16-7; 7 b 20-1; τὰ πρῶτα κινοῦντα 10 a 1; κινεῖται 10 a 12; κινούμενον 5 a 5; 7 b 16; τὰ κινούμενα 5 b 2; τὸ κινεῖσθαι 10 a 9; τῷ κινεῖσθαι 4 b 23
κίνησις	αἰτίαν τῆς κινήσεως 4 b 22; κινήσεως ἀρχὴν 5 a 5; τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν 10 a 20; ὑπὲρ αὐτῆς τῆς κινήσεως ἀπορεῖν 6 a 13; καθάπερ ζωὴν καὶ κίνησιν 4 b 4; ψυχὴ ἅμα καὶ κίνησις 5 b 3; τὴν κίνησιν ἐν τοῖς αἰσθητοῖς 7 b 14-5; ἐν κινήσει 4 b 20; οὐ τὴν ἠρεμίαν διώκουσιν ἀλλὰ τὴν κίνησιν 5 a 25; ἀργία καὶ στέρησίς τις κινήσεως 7 b 12
κινητός	καίπερ κινητῶν ὄντων 5 b 12; τὰ κινητὰ καὶ ὑπὸ τὴν φύσιν 9 a 12
κνῆσις	λελωβημένων κνήσει10 b 12
κοιλία	ἐν τῇ μέσῃ κοιλίᾳ τῆς καρδίας 11 a 11
κοινός	καθόλου καὶ κοινόν τι 9 a 27; κοινῇ καὶ καθόλου 8 b 25
κοινωνία	πρὸς ἄλληλα τοῖς τε νοητοῖς καὶ τοῖς τῆς φύσεως 4 a 10
κόσμος	περὶ τὸν κόσμον 6 b 8; ὅσα κόσμου χάριν 11 a 13; ὁ Κόσμος (Heracl.) 7 a 14
κρᾶσις	τὴν κρᾶσιν ἀρίστην 11 a 12
κρείττων	προτέρα καὶ κρείττων 4 b 6; δυνάμει κρείττονι καὶ προτέρᾳ 5 a 1-2; εἰς κρείττω τινὰ μερίδα 5 a 9; κρεῖττον ἡ τῆς ψυχῆς (sc. κίνησις) 5 b 8
κυκλικός	ἡ κυκλικὴ (sc. κίνησις) 5 a 3; 5 b 7; 5 b 23; ὑπὸ τῆς κυκλικῆς περιφορᾶς 5 b 24-5; τὰ κυκλικά 5 a 16; 5 b 11
κυκλοφορία	(κάλλιον ἄν τι δέοι) τῆς κυκλοφορίας 5 b 28
κύριος	πρῶτον καὶ κυριώτατον 4 b 5; τὰ κυριώτατα καὶ πρότερα 10 a 7
κωλύειν	οὐθὲν κωλύει ... ὑπάρχειν 6 a 11; εἰ μὴ ἐκωλύετο 5 b 28
λαμβάνειν	δυνάμει τινὶ καὶ ὑπεροχῇ λαμβάνειν 4 b 14; κατ' ἀναλογίαν ληπτέον 8 a 20; (οὐχ οἷόν τε) καθόλου καὶ κοινόν τι λαβεῖν ἐν τοῖς πλεοναχῶς λεγομένοις 9 a 27; εἴ τις τοιαύτας λαμβάνοι τὰς μορφάς 11 b 22; ἕτερα λάβοι τις ἂν τοιαῦτα 10 b 16; λαμβάνουσιν ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις 7 a 16; οὐχ ὁμοίως ληπτέον 8 a 3; ληπτέον τινὰς ὅρους 11 a 2; πειρατέον τινὰ λαμβάνειν ὅρον 11 b 25; ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες 9 b 9
	λαμβάνει τινὰς ἰδέας ἢ πρὸς ἄλληλα διαφοράς 10 b 28
λέγειν	ὡς 6 a 21; ὁ τοῦτο λέγων 6 a 4; οἱ περὶ τῆς ὅλης οὐσίας λέγοντες 11 a 22-3; τοῖς λέγουσιν 5 a 13; κατὰ πάντων τὸ εἶναι λέγομεν 8 b 2; πειρατέον λέγειν πότερον ... ἢ 4 b 7; τὸ τίνος ἕνεκα λέγειν 10 a 1-2; μὴ διαιρετὸν μηδὲ ποσόν τι λέγων 5 a 9
	ὃ δ' ἐξ ἀρχῆς ἐλέχθη 11 b 25; τὸ ἕτερον λεχθὲν 7 b 23- 8 a 1; τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολάς 11 b 14; ὥσπερ εἴρηται 6 b 10; τῶν εἰρημένων 6 b 15
	οἰκειότερον λέγειν 9 a 22; ἀληθέστερον εἰπεῖν (ὡς, ὅτι) 8 b 12; 9 b 23; οὐ ῥᾴδιον εἰπεῖν 9 b 2
	καθόλου λέγειν 8 a 26; ἤτοι κοινῇ καὶ καθόλου λεγόμενον ἢ ἰδίᾳ πως καθ' ἕκαστον 8 b 25; εἰ μή τις λέγοι καθ' ὁμοιότητα καὶ μεταφοράν 5 b 1; καὶ ἁπλῶς λεγόμενα καὶ καθ' ἕκαστον 11 a 4
	ἐν τοῖς πλεοναχῶς λεγομένοις 9 b 1; καθάπερ πλεονάκις λέγεται 10 a 24
	ὡς εἰπεῖν 7 a 16; 7 a 18; 11 b 4; ὡς ἁπλῶς εἰπεῖν 4 b 20

	ὅσοι τε τὸ ἓν καὶ ὅσοι τοὺς ἀριθμοὺς λέγουσιν 5 a 27
λευκός	τὰ λευκὰ καὶ μέλανα 8 b 3
λόγος	proportion σχήματά τε καὶ μορφὰς καὶ λόγους περιτιθέντων 4 a 23; ἐν τάξει καὶ λόγῳ 7 a 12; account, explanation οἷον ἄρτιος ὁ λόγος 5 a 6; ἔοικεν ὁ λόγος ἔχειν τι πιστόν 10 b 26; ἐν ὑψηλοτέρῳ καὶ ἀληθινωτέρῳ λόγῳ 5 a 12; οἱ ἁπάντων ζητοῦντες λόγον ἀναιροῦσιν λόγον 9 b 21, 22; τὸ μὴ ἔχειν λόγον 10 b 25; τοὺς λόγους ἑκάστοις περιθεῖναι 7 a 20; τῆς αἰτίας μείζονα ζητεῖ λόγον 5 a 22; formula τῷ μορφοῦσθαι κατὰ τοὺς λόγους 8 a 14
	argument, discussion (ὅθεν) ὁ πρῶτος λόγος 7 b 9-10; ὥσπερ ἑτέρων λόγων 6 a 15; λόγου δεῖται πλείονος 5 a 14; ἐπιποθεῖ τινα λόγον 8 a 8
	statement ὁ τοιοῦτος λόγος 8 a 27
λογώδης	κίνδυνος μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον 7 b 18
λοιπός	ἐν ταῖς λοιπαῖς (ἐπιστήμαις) 6 b 22; 7 a 1; τῶν λοιπῶν 6 b 4; ἀλλὰ λοιπόν 5 a 1; 5 b 18
λύειν	κατ' ἐκεῖνο λύοιτο ἂν 5 a 4
λωβᾶσθαι	λελωβημένων κνήσει τε καὶ παραιωρήσει καὶ ἐπιπροσθήσει τῶν ὀμμάτων10 b 12
μάθημα	αὐτὰ τὰ μαθήματα 9 a 17
μαθηματικός	ἐν ταῖς μαθηματικαῖς 7 a 3; (τὰ) μαθηματικά 6 b 9; 11 b 20; ἐν τοῖς μαθηματικοῖς 9 a 16; ἐν τοῖς μαθηματικοῖς μόνον 4 a 18
μακρός	μακρὰν τὴν ἀπόστασιν 11 a 27
μάλιστα	πρώτη καὶ μάλιστα 5 b 9; τὸ μέγιστον καὶ μάλιστα δοκοῦν 10 b 16-7; ὡς μάλιστα δέον 6 b 26; καὶ μάλιστα 9 b 19; 10 a 10; μάλιστα δέ 11 b 17; ὅτι μάλιστα σύμφωνον 8 a 4
μᾶλλον	οὕτω μᾶλλον ἀποδοτέον ἢ 5 a 10; καὶ μᾶλλον 10 b 21; μᾶλλον δέ 8 a 24-5; 11 a 15; μᾶλλον δ' ἀληθέστερον 9 b 22
μαστός	τοῖς ἄρρεσιν οἱ μαστοί 10 b 8
μάταιος	τὰ μὲν ὥσπερ μάταια 10 b 8
μάτην	τοῦ πάνθ' ἕνεκά του καὶ μηδὲν μάτην 10 a 22-3
μέγας	ἄλλως μέγα 9 b 17; σεμνοτέραν καὶ μείζω 4 a 9; μείζω τινὰ αἰτίαν ζητεῖ 7 b 18; τῆς αἰτίας μείζονα ζητεῖ λόγον 5 a 22; ἀρχὴ καὶ μέγιστον 9 a 11; μέγιστον παράδειγμα 7 b 2; τὰς μεγίστας (sc. πραγματείας) 9 b 19; τὸ μέγιστον καὶ μάλιστα δοκοῦν 10 b 16
μέγεθος	τὰ μεγέθη 9 b 26; κεράτων μεγέθη 10 b 11
μεθίστασθαι	πρὸς ἄλλοτ' ἄλλο μεθισταμένων 10 b 6
μέθοδος	ἐν ταῖς ἄλλαις μεθόδοις 6 b 18
μέλας	τὰ λευκὰ καὶ μέλανα 8 b 4
μέλλειν	τὸ μὴ ὂν μηδὲ γεγονὸς μηδὲ μέλλον 8 b 7
μέν	εἰ μὲν γάρ 4 a 18; 7 b 11; μὲν δή 5 a 6; for μὲν οὖν see οὖν s.v.
	μὲν ... δέ 8 a 11; 8 a 14; 8 b 2; 8 b 8; ἀλλὰ δὴ ... μέν 11 b 24; εἰ οὖν ... μέν, οὐκ ... δέ 10 a 6
	ὁ μὲν ... ἐν δὲ ταῖς ... 7 a 11-3; οἱ μὲν ... (οἱ δὲ ...) οἱ δέ 7 a 6-7; ἡ μὲν ... ἡ δέ 9 b 6-7; αἱ μὲν ... καὶ ἕτερα δέ 10 b 4; τὸ μὲν ... ἡ δέ 9 b 7; τὸ μὲν ... τὸ δέ 8 a 10; τὰ μέν ... (τὰ δὲ ...) τὰ δέ 4 a 15; 6 a 28 – b 2; 8 b 13; 9 a 8-9; 10 a 26; τῶν μὲν ... τῶν δέ 11 b 18-9; τὰ μὲν ... ἔτι δέ 10 b 7; ὅδε μὲν ... ὅδε δέ 6 a 21; ἁπλῶς μὲν ... ὡς δέ 11 a 5; ἔνθα μὲν γὰρ ... ἐν δὲ ταῖς λοιπαῖς 6 b 21

δὲ ... μὲν 6 a 2; καὶ ... μέν 6 a 14; 7 b 6

μερίς — ἐξαίρων εἰς κρείττω τινὰ μερίδα καὶ θειοτέραν 5 a 10

μερισμός — τῶν ὄντων ὁ μερισμὸς εἰς ὕλην καὶ μορφήν 8 a 9

μεριστός — τὸ διαιρετὸν καὶ μεριστόν 5 a 11; ὡς ἂν πόλις ἢ ζῷον ἢ ἄλλο τι τῶν μεριστῶν 8 a 6

μέρος — πότερα μέρη ταῦτα ἢ οὐ μέρη 5 b 20; εἰ μέρη, πῶς μέρη 5 b 21; ὁ ὅλος οὐρανὸς καὶ ἕκαστα τῶν μερῶν 7 a 11; καθ' ἕκαστον τῶν εἰδῶν ἢ μερῶν 10 a 4-5; τὸ ἐν μέρει 9 a 2

μέσος — ἐν τῇ μέσῃ κοιλίᾳ τῆς καρδίας 11 a 11; τὸ μέσον τιμιώτατον 11 a 12; τῶν περὶ τὸ μέσον 5 b 12; τὴν τοῦ μέσου χώραν 11 a 24

μετά — + acc. τὸ μετὰ ταῦτα 5 a 14; τὰ μετὰ τὰς ἀρχάς 6 b 19; 7 a 3
+ gen. μετὰ ψυχῆς 5 b 1

μεταβαίνειν — ὅταν ἐπ' αὐτὰ τὰ ἄκρα καὶ πρῶτα μεταβαίνωμεν 9 b 10-1

μετάβασις — εἰς τὸ χεῖρον ἡ μετάβασις 7 b 8; εἰς τὸ βέλτιον 8 a 15

μεταβολή — μεταβολὰς ἔχουσα παντοίας 4 a 5; αἱ ἐν αὐτῇ τῇ γῇ ἀλλοιώσεις καὶ μεταβολαί 10 b 5; τὰς τῆς γῆς μεταβολάς 11 b 14-5; (συμβαίνει οἷον κατὰ συμβεβηκὸς) καὶ εἰς τοὺς τόπους καὶ εἰς ἄλληλα τὰς μεταβολάς 5 b 26; πρὸς ἄλλοτ' ἄλλο μεταβολαί 10 b 3; τῇ ἑτέρων τάξει καὶ μεταβολῇ 7 a 23

μεταδιδόναι — (τὴν φύσιν) ἐφ' ὧν ἐνδέχεται μεταδιδόναι τοῦ ἀεὶ καὶ τοῦ τεταγμένου 11 a 7

μεταδιώκειν — πῶς ἕκαστα μεταδιωκτέον; 9 a 11

μεταφορά — καθ' ὁμοιότητα καὶ μεταφοράν 5 b 2

μέχρι — μέχρι τινός 6 b 10; μέχρι τινὸς ἐλθόντες καταπαύονται 6 a 23; μέχρι τινὸς δυνάμεθα δι' αἰτίου θεωρεῖν 9 b 8; μέχρι του προελθόντα παύεσθαι 6 a 18; μέχρι πόσου τὸ τεταγμένον 7 b 7; 9 b 2; μέχρι ζῴων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων 9 a 14; μέχρι τῶν εἰρημένων 6 b 15; μέχρι τούτων οἷον ἄρτιος ὁ λόγος 5 a 5

μή — μὴ ἐπεισοδιῶδες 4 a 14; μὴ λογῶδες 7 b 17; μὴ ... λέγων 5 a 8; μὴ ὑπαρχούσης 8 a 17; μὴ ποιοῦσιν 10 b 25; μὴ ... εἶναι 7 b 20; μὴ ὄν 8 a 10; μὴ ... παύεσθαι 6 a 18
εἰ μή 5 b 1; εἰ δὲ μή 4 b 2; 10 a 13; 11 a 1; εἰ μὴ ἄρα 4 b 10; 5 b 28; 6 a 10; 8 a 21; 11 b 19; εἴπερ μή 10 b 9; εἰ γὰρ καὶ μή 11 b 20; κἂν μή 8 b 14
τὸ μὴ ὄν 8 b 7; ἐν τῷ μὴ φωτί 8 b 15; τὸ μὴ εἶναι 5 a 4; τὸ μὴ ἔχειν 9 b 11; 10 b 24; τῷ μὴ δοκεῖν ἔχειν 10 a 25; τῷ μὴ δύνασθαι 5 b 28; τὸ μὴ πάντα τὴν αὐτήν 5 a 18

μηδέ — μὴ ... μηδὲ (... μηδέ) 5 a 8; 8 b 7; μηδ' ... ἢ ὡδὶ ζητητέον 10 a 17

μηδείς — μικράν τιν' ἢ μηδεμίαν διαφοράν 6 a 5; τοῦ πάνθ' ἕνεκά του καὶ μηδὲν μάτην 10 a 22

μηθείς — μηθὲν τοιοῦτον 7 a 13

μήτε — τὸ μήτε τόδε μήτε ποιὸν μήτε ποσόν 8 a 17

μηχανᾶσθαι — μεμηχανημένα δι' ἡμῶν 4 a 21

μικρός — μικράν τιν' ἢ μηδεμίαν διαφοράν 6 a 5

μιμεῖσθαι — τὴν φύσιν μιμοῦνται 7 a 5; οὐ μιμοῦνται 8 a 1; μιμεῖσθαι ἐθέλειν 11 b 1*

μίμησις — ἅμα τῇ μιμήσει 5 a 25

μνεία — οὐδεμίαν ἔτι ποιοῦνται μνείαν 6 b 5

μόνος — τὰ ὄντα μόνον περὶ τὰς ἀρχάς 6 b 17; ἐν τοῖς μαθηματικοῖς μόνον τὰ νοητά 4 a 18; τὰ κυκλικὰ μόνον ἐφετικά 5 b 11; οὐκ ἐν ἀοριστίᾳ μόνον

11 a 20; οἱ δὲ μόνον τὰς ὑλικάς 7 a 7; τοσοῦτο μόνον δηλοῦντες 6 a 28; περὶ τῶν πρώτων μόνον 6 b 11; τῶν ἀρχῶν μόνον 6 b 16
οὐ μόνον ... ἀλλὰ καί 5 b 22

μορφή — ὁ μερισμὸς εἰς ὕλην καὶ μορφήν 8 a 9-10; μορφάς τε παντοίας καὶ ποικιλίας 7 a 23- b 1; (ὡρισμένην τινὰ φύσιν) καὶ μορφαῖς καὶ εἴδεσιν καὶ δυνάμεσιν 10 b 22; σχήματά τε καὶ μορφὰς καὶ λόγους 4 a 22; καὶ μορφαῖς καὶ δυνάμεσιν καὶ περιόδοις 7 a 12; τοιαύτας τὰς μορφὰς οἵας Δημόκριτος ὑποτίθεται τῶν ἀτόμων 11 b 22

μορφοῦσθαι — τῷ μορφοῦσθαι κατὰ τοὺς λόγους 8 a 13; πότερον ἀμόρφους καὶ οἷον δυναμικάς, ἢ μεμορφωμένας 6 b 26

μουσική — καθάπερ ἐν γραμματικῇ καὶ μουσικῇ 7 a 2

νοητός — τὰ πρῶτα καὶ νοητά 9 a 12; ἐν τοῖς μαθηματικοῖς μόνον τὰ νοητά 4 a 19; ὁμοίως αἰσθητὰ καὶ νοητὰ καὶ ἔτι δὴ τὰ θεῖα 6 b 8; ἔν τε τοῖς αἰσθητοῖς καὶ νοητοῖς 9 b 4; ἐν νοητοῖς, οὐκ αἰσθητοῖς τιθέασιν 4 a 6-7; τοῖς τε νοητοῖς καὶ τοῖς τῆς φύσεως 4 a 10

νομίζειν — σεμνοτέραν καὶ μείζω νομίζουσιν (sc. τὴν τῶν πρώτων θεωρίαν) 4 a 9

νοῦς — τὸν νοῦν καὶ τὸν θεόν 7 b 23; αὐτῷ τῷ νῷ θιγόντι καὶ οἷον ἀψαμένῳ 9 b 14

νῦν — νῦν γὰρ οἷον ἀπεωσμένα τῶν ἐντιμοτάτων 5 b 21; νῦν δὲ μέχρι τινὸς ἐλθόντες καταπαύονται 6 a 23; ἡ νῦν ἀπορία 10 a 20

ὁ — for ὁ μὲν ... ὁ δέ (κ.τ.λ.) see μέν s.v.
ἡ ... ἡ δέ 4 a 3-5; οἱ δέ 6 b 15; 8 b 6; τὰ δέ 4 a 15[2]; 11 a 24; τῶν δέ 9 a 2
τὸν θεόν 4 b 15; 7 b 23; 11 b 8; τῷ θεῷ 11 b 8; ὁ Κόσμος (Heracl.) 7 a 15; τῷ Τιμαίῳ 6 b 27
ὁ οὐρανός 10 a 14; ὁ ἀριθμός 6 a 21; ὁ λόγος 5 a 6; 8 a 27; 10 b 26; ὁ τρόπος 10 a 8; ὁ ἀφορισμός 10 a 23; ὁ μερισμός 8 a 9; τὸν ὅρον 9 b 19; τοῦ οὐρανοῦ 5 b 20; 6 b 4; 10 a 10; τοῦ ἡλίου 7 b 5; τοῦ οἰσοφάγου 11 a 10; τὸν κόσμον 6 b 8; τὸν οὐρανόν 6 a 14; 9 b 24; τὸν ἀέρα 7 b 2; τῷ οὐρανῷ 10 a 18; τῷ ἀέρι 11 b 17; τῶν ἀριθμῶν 6 a 2; τῶν ἀστρολόγων 5 a 23; τῶν ἐλάφων 10 b 11; τῶν ὀμμάτων 10 b 13; τοὺς ἀριθμούς 5 a 26; 5 a 27; 6 a 25; 6 b 13; τοὺς λόγους 7 a 20; τοὺς τόπους 5 b 25; ἡ ἀρχή 9 a 4; ἡ οὐσία 8 b 21; 10 a 14; ἡ φύσις 4 a 17; 4 b 19; 5 a 2; 8 a 22; 10 a 2; ἡ ἐνέργεια 9 a 4; ἡ περιφορά 6 a 7; 10 a 16; ἡ ἔφεσις 5 a 28; ἡ ὄρεξις 5 b 10; 11 a 14; ἡ αἴσθησις 8 b 10; 7 b 19; ἡ γένεσις 8 a 12; ἡ μετάβασις 7 b 8; 8 a 15; ἡ ὁδός 9 b 4; ἡ τάξις 6 b 28; ἡ συναφή 4 a 20; ἡ θεωρία 9 b 14; ἡ σύνεσις 9 b 17; ἡ ἀπόφασις 5 a 13; ἡ πίστις 9 b 17; τῆς ἀρχῆς 4 b 19; τῆς αἰτίας 5 a 22; τῆς οὐσίας 6 a 7; 10 a 11; τῆς δυάδος 6 a 28; 11 b 2; τῆς φύσεως 4 a 3; 4 a 11; 4 b 3; 4 b 23; 9 b 20; 10 a 6; 10 a 9; 11 a 21; τῆς ἠρεμίας 7 b 10; τῆς διανοίας 5 b 4; τῆς ψυχῆς 5 b 9; τῆς καρδίας 11 a 11; τῆς κινήσεως 4 b 22; τῆς περιφορᾶς 5 b 24; τῆς κυκλοφορίας 5 b 27; τῆς ὁρμῆς 11 b 27; τῆς ἐφέσεως 5 a 15; τῆς ὕλης 7 a 8; τῇ φύσει 11 b 26; τῇ περιφορᾷ 10 a 14; 10 b 27; τῇ τάξει 7 a 23; τῇ κοιλίᾳ 11 a 11; τὴν αἰτίαν 11 b 8; τὴν οὐσίαν 5 a 7; 4 a 13; τὴν φύσιν 7 a 5; 9 a 13; 11 a 5; τὴν δυάδα 6 a 24; τὴν ἠρεμίαν 5 a 24; τὴν ἐνέργειαν 5 a 7; 5 b 23; 7 b 13; τὴν κίνησιν 5 a 25; 7 b 14-5; 10 a 20; τὴν φοράν 10 a 18; τὴν γένεσιν 6 b 15; τὴν ζωήν 10 a 17; τὴν ὄρεξιν 6 a 12; τὴν ἀσθένειαν 9 b 12; τὴν τάξιν 11 b

18; τὴν κρᾶσιν 11 a 12; τὴν ἀπόστασιν 11 a 27; τὴν χώραν 11 a 24; τὴν γῆν 7 b 2; 10 a 28; τὴν φάρυγγα 11 a 10; τὴν θεωρίαν 4 a 2; τὴν σκέψιν 7 b 6; τὴν ἀλήθειαν 6 b 16; αἱ ἀρχαί 4 a 19; αἱ φύσεις 7 a 18; αἱ φοραί 5 a 16; αἱ ὀρέξεις 5 b 4; αἱ ἀλλοιώσεις 10 b 4; αἱ προχωρήσεις 10 b 1; τῶν ἀρχῶν 6 a 15; 6 b 16; 6 b 21; 6 b 22; τῶν σφαιρῶν 5 a 22; τῶν αἰσθήσεων 9 b 6; τῶν ἐπιστημῶν 6 b 20; ταῖς ἀρχαῖς 7 b 9; 7 b 11; τὰς ἀρχάς 4 a 16; 6 b 12; 6 b 14; 6 b 17; 6 b 19; 6 b 23; 7 a 4; 7 a 7; 7 a 19; 11 b 7; τὰς αἰτίας 8 b 11; τὰς ὥρας 7 b 3; ταῖς μεθόδοις 6 a 18; ταῖς τέχναις 8 a12; τὰς ἰδέας 6 b 13; τὰς μορφάς 11 b 22; τὰς διαφοράς 8 b 11; τὰς φοράς 9 b 25; τὰς μεταβολάς 5 b 26; τὰς ἀποστάσεις 9 b 26; τὰς χώρας 5 b 22; τὰς πραγματείας 9 b 18; τὰς τέχνας 7 a 4; 8 a 20; τὸ πλῆθος 5 a 21; τὰ σώματα 6 a 26; τὰ μεγέθη 9 b 25; τὰ σχήματα 9 b 26; τὰ ἐπίπεδα 6 a 26; τὰ ὄργανα 7 a 5; τῶν μερῶν 7 a 11; τῶν εἰδῶν 10 a 4; τῶν ζῴων 10 b 17; 11 a 8; τοῖς εἴδεσιν 8 a 18; τοῖς ζῴοις 5 b 5; 10 a 12; 10 a 17; τοῖς φυτοῖς 10 b 20

ἅμα τῇ μιμήσει 5 a 25; τῷ μὴ φωτί 8 b 15; αἱ ἔφοδοι καὶ ἀνάρροιαι 10 a 28; τὰς τροφὰς καὶ γενέσεις 10 b 17; τοῖς ἄρρεσιν οἱ μαστοὶ καὶ τοῖς θήλεσιν ἡ πρόεσις 10 b 8-9

ὁ κάλλιστος 7 a 14; οἱ πολλοί 6 a 23; οἱ Πυθαγόρειοι 11 a 27; ἡ κυκλική 5 a 3; 5 b 23; τῆς κυκλικῆς 5 b 7; 5 b 11; τῆς ἑτέρας 11 b 6; ταῖς λοιπαῖς 6 b 21; 7 a 1; τὰς ὑλικάς, τὰς ἐμμόρφους (sc. ἀρχάς) 7 a 7; τὸ πᾶν 4 a 14; τὸ μέσον 5 b 12; 11 a 12; τὸ αἴτιον 9 a 1; τὸ τίμιον 11 a 23; τὸ σύμφωνον 5 a 20; τὸ τέλεον 7 a 9; τὸ ἔμψυχον 11 a 16; τὸ ἴδιον 4 b 21; τοὐναντίον 6 b 18; τὸ ἄψυχον 11 a 17; τὸ ἄπειρον 11 b 3; τὸ ἀμερές 8 a 3; τοῦ παντός 4 a 21; 8 a 23; 8 b 8; 10 a 16; τοῦ σύμπαντος 10 a 3; 11 b 26; 12 a 1; τοῦ ὅλου 10 b 27; 11 b 5; τοῦ μέσου 11 a 24; τῷ αὐτομάτῳ 10 b 27; τῷ παραδόξῳ 8 b 6; τὰ θεῖα 6 b 9; τὰ ἀίδια 4 a 16; τὰ ἄτομα 9 a 3; τὰ μαθηματικά 11 b 20; τὰ κυκλικά 5 a 16; τὰ οὐράνια 11 b 19; τὰ ἄλλα 7 a 6; 10 a 4; τἄλλα 6 a 26; τῶν ἀτόμων 11 b 23; τῶν ἰδίων 8 b 21; τῶν ἐναντίων 8 b 5; τῶν ἀψύχων 9 a 15; τῶν ἄλλων 4 b 14; 6 a 16; 6 b 6; 6 b 12; 8 a 2; τῶν λοιπῶν 6 b 4; τοῖς οὐρανίοις 10 a 19; 10 a 27; τοῖς μαθηματικοῖς 4 a 18; 9 a 16; τοῖς ἀψύχοις 10 b 21

τὰ λευκὰ καὶ μέλανα 8 b 3; γραμματικῇ καὶ μουσικῇ καὶ ταῖς μαθηματικαῖς 7 a 3

τῆς ἀρίστης (sc. κινήσεως) 5 b 8; τὰς μεγίστας (sc. πραγματείας) 9 b 19; τὰς ἔτι προτέρας (sc. πραγματείας) 9 b 20; τὸ βέλτιον 8 a 14; 11 a 9; 11 b 27; τὸ χεῖρον 7 b 8; 8 a 24; τὸ πλέον 7 b 8; τὸ ἄριστον 11 a 2; 11 b 9; 5 b 26; τὸ μέγιστον 10 b 16; τὸ πρῶτον 5 b 7; 6 a 1; τοῦ ἀρίστου 5 a 28; 5 b 26; 11 a 6; τοῦ πρώτου 5 b 14; 5 b 27; τῷ βελτίονι 8 a 24; τῷ πρώτῳ 4 b 11; τὰ πρῶτα 9 a 12; τὰ κυριώτατα 10 a 7; τὰ φωτεινότατα 9 b 13; 11 b 13; τῶν πρώτων 4 a 2; 4 a 5; 6 b 11; τῶν ἐντιμοτάτων 5 b 21; τοῖς ἀρίστοις 6 a 4; τοῖς πρώτοις 10 a 6; τοῖς τιμιωτάτοις 6 b 27

τὸ ἄτακτον 11 b 4; τοῦ ὀρεκτοῦ 5 a 2; τοῦ ἀκινήτου 10 a 20; τὰ νοητά 4 a 19; τῶν φθαρτῶν 4 a 16-7 τοῖς νοητοῖς 4 a 10; τοῖς αἰσθητοῖς 4 a 20; 4 b 19

τὸ διαιρετὸν καὶ μεριστόν 5 a 11; ἔν τε τοῖς αἰσθητοῖς καὶ νοητοῖς 9 b 4

ὁ τῶν ἀστρολόγων (sc. λόγος) 5 a 23; τοῦ Ὁμήρου Διός 5 b 15; ἡ πάντων ἀρχή 4 b 15; ἡ τοῦ σύμπαντος οὐσία 10 a 3; ἡ τῆς ψυχῆς (κίνησις) 5 b 8; ἡ τῆς διανοίας (κίνησις) 5 b 9; ἡ τῶν ἄλλων (sc. ὄρεξις) 8 a 2; ἡ τῆς φύσεως (θεωρία) 4 a 3; ἡ νῦν ἀπορία 10 a 19; τῆς τοῦ σύμπαντος θεωρίας 12 a 1; τῇ τοῦ σύμπαντος οὐσίᾳ 11 b 26; τὴν τοῦ παντὸς φύσιν 8 b 8; τὴν

τοῦ ὅλου φύσιν 11 b 5; τὰς τῆς ὕλης (sc. ἀρχάς) 7 a 8; τὰς τῆς γῆς μεταβολάς 11 b 14; τὰς τῆς φύσεως (sc. πραγματείας) 9 b 20; τὰ τῆς φύσεως 11 a 21; τοῖς τῆς φύσεως 4 a 11; 4 b 3; 4 b 23

οἱ περὶ Σπεύσιππον 6 b 6; ἡ ἐξ ἀμφοῖν (sc. ἐπιστήμη) 8 b 27; τὸ ἐν μέρει 9 a 2; τὸ μετὰ ταῦτα 5 a 14; τὸ κατὰ τὸ πλῆθος 5 a 21; τὸ περὶ τῆς ἠρεμίας 7 b 10; τὸ κατ' ἀναλογίαν 9 a 7; (τοῦ) εἰς τὸ ἄριστον 11 a 2; τὰ ἐν ἀρχῇ 9 a 13; τὰ μετὰ τὰς ἀρχάς 6 b 19; 7 a 3; τὰ κατὰ τὰς φοράς 9 b 25; τὰ περὶ τὸ μέσον 5 b 12; τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν 7 b 1; τῶν ὑπὸ τὰ καθόλου 8 b 18; τοῖς περὶ τὴν γῆν 10 a 27

ἡ κυκλικὴ ἡ συνεχής 5 a 3; ὄρεξιν τὴν ἀρίστην 5 a 20; τὰς ὥρας τὰς ἐτησίους 7 b 3; τὸ τίμιον τὸ περὶ τὴν τοῦ μέσου χώραν 11 a 24

τὸ καθ' ἕκαστον 10 a 11; τὸ τίνος ἕνεκα 10 a 1; τὸ τινὸς χάριν 11 b 15; τὸ ἕνεκά του 7 a 21; τὸ ἕν 5 a 28; 6 a 24; τὸ εὖ 11 a 15; τὸ ὅλον 4 a 8; 11 a 18; τοῦ ἕνεκά του 11 a 1; 11 b 27; τοῦ πάνθ' ἕνεκά του 10 a 22; τοῦ ἑνός 6 b 2; 11 b 3; τοῦ ἀεί 11 a 7; τὰ καθόλου 8 b 19; 8 b 20; τὰ ἐφεξῆς 6 a 17; τὰ τοιάδε 8 a 8; 11 a 3; τῶν τοιούτων 9 b 14; τοῖς καθόλου 8 b 18

τὸ μήτε τόδε μήτε ποιὸν μήτε ποσόν 8 a 7

ὁ τοῦτο λέγων 6 a 3; οἱ περὶ τῆς ὅλης οὐσίας λέγοντες 11 a 22; οἱ ἀπάντων ζητοῦντες λόγον 9 b 21; οἱ τὸ ἓν καὶ τὴν ἀόριστον δυάδα ποιοῦντες 6 a 24; τοῖς λέγουσιν 5 a 13; τοῖς ἔχουσιν 5 b 4; τὸ κινοῦν 5 a 18; 7 b 16; (τὸ) μάλιστα δοκοῦν 10 b 16; τὸ ὄν 8 b 5; 8 b 10; τὸ τεταγμένον 7 b 7; 11 b 21; τὸ λεχθέν 7 b 23; τοῦ ἠρεμοῦντος 8 a 1; τοῦ τεταγμένου 11 a 7; τὰ πρῶτα κινοῦντα 10 a 1; τὰ ὄντα 6 b 17; 11 a 25; 12 a 2; τὰ ὀρεγόμενα 8 a 1; ⟨τὰ⟩ ἑπόμενα <9 a 14>; τὰ κινούμενα 5 b 2; τὰ θεωρούμενα 8 b 22; τὰ λεχθέντα 11 b 14; τῶν ὄντων 6 a 11; τῶν εἰρημένων 6 b 15; 8 a 9; τοῖς λεγομένοις 9 b 1

τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον τὸ εὖ 11 a 15; τὸ μὴ ὂν μηδὲ γεγονὸς μηδὲ μέλλον 8 b 6-7

τὸ εἶναι 8 a 15; 8 b 2; 11 a 18; τὸ τί ἦν εἶναι 8 b 21; τὸ φρονεῖν 9 b 5; τὸ εἰδέναι 9 b 22; τὸ συνιδεῖν 8 b 24; τὸ ἀφορίσαι 9 a 25; τὸ ἀποδοῦναι 4 b 17; ⟨τὸ⟩ περιθεῖναι <7 a 20>; τὸ ἐπίστασθαι 8 b 16; τὸ ὀρέγεσθαι 6 a 10; τὸ κινεῖσθαι 10 a 9; τὸ ὡρίσθαι 6 b 28; τοῦ ζητεῖν 8 a 27; τοῦ ἐπίστασθαι 9 a 10; 9 a 26; τῷ πάσχειν 5 b 6; τῷ κινεῖσθαι 4 b 23; τῷ μορφοῦσθαι 8 a 13; τῷ ἀνάγειν 6 b 11; τῷ πεπαῦσθαι 6 a 8

τὸ ποιεῖν καὶ πάσχειν 7 b 21

τὸ μὴ εἶναι κινήσεως ἀρχήν 5 a 4; τὸ μὴ ἔχειν αἰτίαν 9 b 11; τὸ μὴ ἔχειν λόγον 10 b 24; τὸ μὴ πάντα τὴν αὐτήν 5 a 18; τῷ μὴ δύνασθαι δέχεσθαι 5 b 28; τῷ μὴ δοκεῖν ἔχειν οὕτως 10 a 25; τῷ ἄγνωστα εἶναι 9 a 19

τὸ ἀνήνυτον 5 a 17; τὸ ἔμπροσθεν τὴν φάρρυγα τοῦ οἰσοφάγου 11 a 10; τὸ διὰ τοῦτ' ἠρεμεῖν ὡς ... 7 b 15

see also ὁ αὐτός, αὐτὸς ὁ ..., s.v. αὐτός.

ὅδε — ὅδε μὲν ... ὅδε δὲ ... ὅδε δέ 6 a 21-2 ; ἥδε 8 b 8; τόδε, ... πότερον 6 a 5; τὸ μήτε τόδε 8 a 17; τοῖσδε 10 b 12*

ὁδός — ἡ εἰς τὸ ἄπειρον ὁδός 9 b 4

ὅθεν — ὅθεν ... ὁ πρῶτος λόγος 7 b 9

οἴεσθαι — ὡς οἴονταί τινες 10 a 8

οἰκεῖος — ὁ οἰκεῖος τρόπος 9 a 11; τῆς φύσεως οἰκεῖον 10 a 10; οἰκειότερον λέγειν 9 a 21-2; οἰκειότατον 6 b 28

οἷον — for instance, such as 4 a 14; 6 b 1; 6 b 2; 8 b 26; 9 a 12; 9 b 20; 11 a 9; 11 b 14
οἷον κοινωνία 4 a 10; οἷον ζωή τις 10 a 15; οἷον ὕλης εἴδει 11 a 20; οἷον δυναμικάς 6 b 25; οἷον ἄρτιος 5 a 6; οἷον ὑπερβατός 8 b 8; οἷον ὑπερβατόν τι 6 a 2; οἷον τελεώτερα 6 b 20; οἷον ἐξ ἀντικειμένων 7 a 9; οἷον κατὰ συμβεβηκός 5 b 24; οἷον γεννῶντος 7 b 5; οἷον ἀψαμένῳ 9 b 15; οἷον μεμηχανημένα 4 a 21; οἷον ἀπεωσμένα 5 b 21; οἷον ἰσομοιρεῖν 11 b 6
οἷόν τε 8 b 5; 9 a 27; 11 a 8; 11 b 5

οἷος — εἴ τις τοιαύτας λαμβάνοι τὰς μορφὰς οἵας ... 11 b 22

οἰσοφάγος — ἔμπροσθεν τοῦ οἰσοφάγου 11 a 10

ὀλίγος — ὀλίγον τι 11 a 16; ἐν ὀλίγοις 4 b 9; 11 a 19; καὶ ἕτερα οὐκ ὀλίγα 10 b 6; 10 b 15

ὅλος — ἡ ὅλη οὐσία 8 a 23; τὴν ὅλην οὐσίαν 11 b 11; περὶ τῆς ὅλης οὐσίας 11 a 22; ὁ ὅλος οὐρανός 7 a 11; 8 a 6
τὴν τοῦ ὅλου φύσιν 11 b 5; τῇ τοῦ ὅλου περιφορᾷ 10 b 27-8
τὸ ὅλον 4 a 8; τὸ δ' ὅλον 11 a 18; ὅλως 11 b 5; ὅλως δέ 8 a 19; 8 b 24; ἢ ὅλως 10 b 10; καὶ ὅλως 10 b 3;
οὔθ' ὅλως ἀξιόχρεα 4 a 20

ὄμμα — ἐπιπροσθήσει τῶν ὀμμάτων 10 b 13

ὁμογενής — ἔχει διαφορὰν καίπερ ὁμογενῆ πως ὄντα 9 a 17-8

ὅμοιος — ἄπανθ' ὅμοια καὶ ἐν τοῖς ἀρίστοις 6 a 4; οὐ πάντ' ἀγαθὰ οὐδὲ πάντα ὅμοια 8 b 1; οὐθὲν ὅμοιον ἀλλήλοις 8 b 3; λαμβάνουσιν ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις 7 a 16; ὁμοίως καὶ αἰσθητὰ καὶ νοητά 6 b 8; ὁμοίως ἔν τε τοῖς αἰσθητοῖς καὶ νοητοῖς 9 b 3; ὡς δ' αὐτὰ καὶ ἐπὶ τῶν ζῴων ὁμοίως 11 a 8; ἔτι δὲ καὶ κατὰ τὰς τέχνας ὁμοίως 7 a 4; ὁμοίως ὅσοι τε ... καὶ ὅσοι ... 5 a 26; οὐχ ὁμοίως ληπτέον 8 a 3

ὁμοιότης — κατ' ἀναλογίαν καὶ εἴ τις ὁμοιότης ἄλλη 8 a 20; καθ' ὁμοιότητα καὶ μεταφοράν 5 b 1-2

ὁμοίωσις — εἴτε κατ' ἀναλογίαν εἴτε κατ' ἄλλην ὁμοίωσιν 4 b 13

ὁμώνυμος — ἠρεμῶν ὁμώνυμος (sc. οὐρανός) 10 a 15; ὁμώνυμα (sc. ζῷα, φυτά) 10 a 13

ὅμως — καίπερ ... ὅμως 5 b 6; κἂν μὴ ... ὅμως 8 b 15

ὅπου — ὅπου οἷόν τε corresp. to ἐφ' ὧν ἐνδέχεται 11 a 8

ὅπως — (ληπτέον) ὅπως ... ᾗ 8 a 4

ὁρατός — τῷ ἀοράτῳ τὸ ὁρατόν 9 a 23

ὄργανον — τὰ ὄργανα κατὰ τὰς ἀρχάς 7 a 5

ὀρέγεσθαι — σύμφυτον τὸ ὀρέγεσθαι 6 a 10; ὀρέγεσθαι τοῦ ἀρίστου 11 a 6; τὰ ὀρεγόμενα τοῦ ἠρεμοῦντος 8 a 1

ὀρεκτός — ἡ τοῦ ὀρεκτοῦ φύσις 5 a 2

ὄρεξις — ἡ ὄρεξις 5 b 10; 11 a 14; αἱ ὀρέξεις πρὸς ἕκαστον 5 b 4; εἰς ὄρεξιν ... τὴν ἀρίστην 5 a 20; φυσικὴν ὄρεξιν ἐχόντων 5 a 24; ἀφελόντα τὴν ὄρεξιν 6 a 12; ἐφέσει τινὶ καὶ ὀρέξει 6 a 9

ὁρίζειν — ἡ τῶν πρώτων ὡρισμένη καὶ ἀεὶ κατὰ ταὐτά 4 a 6; ὡρισμένην τιν' ἔχουσι φύσιν 10 b 21; ὡρισμέναι αἱ φύσεις 7 a 17; τὸ ὡρίσθαι 6 b 27; ἡ τάξις καὶ τὸ ὡρίσθαι 6 b 28

ὁρμή — τῆς εἰς τὸ βέλτιον ὁρμῆς 11 b 27

ὅρος — ἐν τίνι ποιητέον τὸν ὅρον 9 b 20; ληπτέον τινὰς ὅρους 11 a 2; πειρατέον τινὰ λαμβάνειν ὅρον 11 b 25

ὅς — 5 b 16; ὃν δή 8 a 6; δι' ἧς 4 b 16; 8 b 14; ἀφ' ἧς 5 a 3; ἀφ' ἧς καί 5 b 4; 5 b 10; ἐν ᾗ 11 b 3; ὧν δή 7 b 2; ἐν αἷς 7 b 3; ἅς 6 a 17*

ὃ κινεῖ 7 b 21; ὃ δ' ἐλέχθη 11 b 24; οὗ χάριν 5 a 17; ἔστιν ἔνια, ὧν 9 a 1; ζητοῦσιν (sc. λόγον) ὧν οὐκ ἔστιν 9 b 23; ἐφ' ὧν 9 a 21; 11 a 6

ὅσπερ — ὅνπερ δή 4 b 5; αἵπερ 7 a 5; ὅπερ 6 a 19

ὅσος — ὅσοι τε τὸ ἓν καὶ ὅσοι τοὺς ἀριθμοὺς λέγουσιν 5 a 26; ὅσοι πῦρ καὶ γῆν 6 b 25; ὅσοι τὸν οὐρανὸν ἀΐδιον ὑπολαμβάνουσιν 9 b 24; ὅσοι τῷ θεῷ τὴν αἰτίαν ἀνάπτουσιν 11 b 8; ὅσα κόσμου χάριν 11 a 13; καὶ ὅσα ἄλλα ἀστρολογία δείκνυσιν 9 b 27; καθ' ὅσα διαίρεσις εἰς τὰ ἄτομα 9 a 2; πλὴν ὅσον ἐφαπτόμενοι 6 a 27; ἐφ' ὅσον ἐνδέχεται 11 b 10

ὅταν — ὅταν μεταβαίνωμεν 9 b 10; τὸ καθ' ἕκαστον ὅταν ἐνεργῇ καὶ κινεῖται 10 a 12

ὅτι — (λεγόμενα) 11 a 5; εἰπεῖν 9 b 23; δηλοῦντες 6 a 28; δῆλον 10 a 13; φανερόν 8 b 10
why ζητεῖν 8 b 1; 8 b 2; because 11 a 12
ὅτι μάλιστα 8 a 4

οὐ — 5 a 24; 7 b 13; 8 a 1; 8 a 2; 8 b 5; 8 b 16; 8 b 23; 9 b 15; 10 a 6; 11 a 2; 11 b 5; οὐχ, ὥσπερ εἴρηται, περὶ ... 6 b 10; οὐκ ἂν εἴη 4 b 23; 5 b 8; 7 b 17; οὐκ ἂν γένοιτο 8 a 26; οὐ γάρ 5 a 23; 9 a 27; οὐ γὰρ ἂν οὐδὲ γίνοιτο 8 a 16; οὐ διικνουμένου 5 b 13; οὐ ... οὐδέ 8 b 1; 9 b 23; τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον 11 a 15
ἐν νοητοῖς, οὐκ αἰσθητοῖς 4 a 7; οὐκ ὀλίγα 10 b 6; 10 b 15; πότερα μέρη ταῦτα ἢ οὐ μέρη 5 b 20; μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον 7 b 18; οὐ φυσικὸς (ἢ οὐ πᾶς) 10 a 8-9; οὐ ῥᾴδιος 10 a 23; οὐ ῥᾴδιον 9 b 2; οὐχ ὁμοίως 8 a 3; οὐχ ὥστε συνάπτειν 4 b 2; οὐκ ἐν ἀοριστίᾳ 11 a 20; οὐ μόνον κατὰ τὰς χώρας ἀλλὰ καὶ ... 5 b 22

οὐδαμοῦ — οὐδαμοῦ παραλείπει 11 a 9

οὐδέ — οὐ ... οὐδέ 8 a 17; 8 b 1; 9 b 24; εἰ μηδὲ ..., οὐδέ 10 a 18; τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον 11 a 15; οὐδ' ἂν προέλοιτο 11 b 10; οὐδὲ τῶν ἄλλων οὐθείς 6 b 6; οὐδὲ αὐτὸς ὁ ἀριθμός 4 b 4; οὐδὲ τὸν θεόν 11 b 7

οὐδείς — οὐδεμία 4 a 11; οὐδεμίαν ἔχει φύσιν 4 a 23; οὐδεμίαν ἔτι ποιοῦνται μνείαν 6 b 5

οὐθαμῶς — οὐθαμῶς φανερόν 5 a 21

οὐθείς — τῶν ἄλλων οὐθείς 6 b 6; οὐθέν 5 b 12; 8 b 2-3; οὐθὲν κωλύει 6 a 11; οὐθὲν ἧττον 8 a 15; οὐθενὸς ἕνεκα 10 b 18

οὐκέτι — οὐκέτι δυνάμεθα 9 b 11

οὖν — δ' οὖν 4 a 13; 4 b 9; 4 b 11; 6 a 15; 9 a 23; εἰ δ'οὖν 4 a 17; 5 b 7; εἰ οὖν 10 a 5; μὲν οὖν 4 b 17; 6 b 11; 7 a 6; 9 b 8; 11 a 25; τί οὖν 5 a 25; ἆρ' οὖν 10 a 16

οὐράνιος — τὰ οὐράνια 11 b 19; ἐν τοῖς οὐρανίοις 10 a 18; 10 a 27

οὐρανός — cosmos ὁ ὅλος οὐρανός 7 a 11; 8 a 6 μέρη τοῦ οὐρανοῦ 5 b 20; τὸν οὐρανὸν ἀΐδιον ὑπολαμβάνουσιν 9 b 24; φθείροι ἂν τὸν οὐρανόν 6 a 14
heaven 6 b 3; (τὸ κινεῖσθαι οἰκεῖον) τοῦ οὐρανοῦ 10 a 10; ὁ οὐρανὸς ἐν τῇ περιφορᾷ κατὰ τὴν οὐσίαν 10 a 14; ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις 10 a 18; τὸν πρῶτον οὐρανόν 6 a 7; (the heavens?) 6 b 4

οὐσία — essence ἡ οὐσία καὶ τὸ τί ἦν εἶναι 8 b 21; ἡ γένεσις ἢ οὐσία γε 8 a 13; τὴν ἐνέργειαν καὶ τὴν οὐσίαν ἀποδιδούς 5 a 8; κατὰ τὴν οὐσίαν 10 a 14; τῆς οὐσίας 6 a 7-8; 10 a 11; οὐσίᾳ (ταὐτό) 9 a 5
ἡ τοῦ σύμπαντος οὐσία 10 a 3; ἐν τῇ τοῦ σύμπαντος οὐσίᾳ 11 b 26; ἡ ὅλη οὐσία τοῦ παντός 8 a 23
entity ἑτέρα τις οὐσία 4 b 6

being ἡ πᾶσα οὐσία 4 a 13; τὴν ἅπασαν οὐσίαν 7 a 10; οἱ περὶ τῆς ὅλης οὐσίας λέγοντες 11 a 22; τὴν ὅλην οὐσίαν ἐξ ἐναντίων καὶ ⟨ἐν⟩ ἐναντίοις οὖσαν 11 b 11

οὔτε — οὔτε ... οὔτε 4 a 19-20; 11 b 15

οὗτος — 6 b 7; τούτοις 9 b 27; ἐκ τούτων 6 b 14; αὕτη 4 b 11; 11 b 27; ταύτην 4 b 7; 4 b 21; ταύτης 11 b 5; ταύτας 6 b 13; 6 b 26; ταύτης ἢ τούτων 6 a 15
τοῦτο 4 b 20; 5 b 10; 5 b 14; 6 a 2; 6 a 3; 6 a 14; 6 a 19; 8 a 21; 9 b 1; διὰ τοῦτο 7 b 15; ἐν τούτῳ 9 a 1
ταῦτα 5 b 20; 7 b 5; 8 b 19; 10 b 18; 10 b 23; 10 b 27; μετὰ ταῦτα 5 a 14; παρὰ ταῦτα 9 a 6; τούτων 11 b 20; τούτων πέρι 11 b 24; μέχρι τούτων 5 a 6; τούτων χάριν 10 b 19; τούτοις 10 b 7; ἐν τούτοις 6 b 17; 11 b 21
αὐτὸ τοῦτο 9 b 17; εἰς αὐτὸ τοῦτο 10 b 24; πρὸς αὐτὰ ταῦτα 9 a 25; αὐτῶν τούτων 9 a 13
καὶ ταῦτα 10 b 25

οὕτω — see οὕτως

οὕτως — οὕτως γάρ 9 a 4; οὕτω γάρ 5 a 10; εἰ δ' οὖν οὕτω, ... 4 a 17; εἰ γὰρ καὶ ... οὕτως, ... 11 a 14; ἀλλ' οὕτω γε 8 a 14; τὸ οὕτως ἀποδοῦναι 4 b 17; ἔχειν οὕτως 10 a 26; ἔχειν οὕτω 7 a 2

ὀχεύειν — ὥσπερ ὁ ἐρῳδιὸς ὀχεύει 10 b 15

πάλιν — 7 a 20

παντοῖος — ἀτακτοτέρα, μεταβολὰς ἔχουσα παντοίας 4 a 5; μορφὰς παντοίας καὶ ποικιλίας 7 b 1

παρά — + gen. παρὰ τοῦ πρώτου δέοι 5 b 27; + acc. καὶ εἰ ἄρα παρὰ ταῦτα διαιρέσεις 9 a 6; παρὰ φύσιν 10 b 14

παράδειγμα — μέγιστον παράδειγμα 7 b 2-3

παράδοξος — οἱ ... τῷ παραδόξῳ χρώμενοι 8 b 6; παραδοξότερον 8 b 4-5

παραιώρησις — λελωβημένων παραιωρήσει 10 b 13

παραλείπειν — (τὸ βέλτιον) οὐδαμοῦ παραλείπει 11 a 9; σχεδὸν τἆλλα παραλείπουσιν 6 a 27

παρόμοιος — παρόμοια τούτοις 10 b 6

πᾶς — οὐ πᾶς 10 a 9; εἰ μὴ πᾶν ἀλλὰ πλέον 11 b 20; πᾶσα ὡς εἰπεῖν ἀμορφία 11 b 4; σχεδὸν ἐπιστήμη πᾶσα 8 b 21; ἐμμόρφους πάσας (sc. τὰς ἀρχάς) 7 a 7
τὴν πᾶσαν οὐσίαν 4 a 13; τὴν ἅπασαν οὐσίαν 7 a 10
τὸ πᾶν 4 a 14; τοῦ παντός 4 a 21; ἡ τοῦ σύμπαντος οὐσία 10 a 3; ἐν τῇ τοῦ σύμπαντος οὐσίᾳ 11 b 26; ἡ ὅλη οὐσία τοῦ παντός 8 a 23; τὴν τοῦ παντὸς φύσιν 8 b 8; ἡ περιφορὰ τοῦ παντός 10 a 16; τῆς τοῦ σύμπαντος θεωρίας 12 a 1
πάντα τὰ ἄριστα βουλόμενον 6 a 1; πάντ' εἰς τὸ ἄριστον ἄγειν 11 b 9; τοῦ πάνθ' ἕνεκά του 10 a 22; πρὸς τὸ ἕνεκά του συνάγοντας ἐν ἅπασιν 7 a 21; τὴν φύσιν ἐν ἅπασιν ὀρέγεσθαι τὸ ἀρίστου 11 a 5-6; ἅπαντ' ἐν τάξει καὶ λόγῳ 7 a 12; ἅπανθ' ὅμοια καὶ ἐν τοῖς ἀρίστοις εἶναι 6 a 4; οὐ πάντ' ἀγαθὰ οὐδὲ πάντα ὅμοια 8 b 1; δι' ἧς ἅπαντα καὶ ἔστιν καὶ διαμένει 4 b 16; τὸ μὴ πάντα τὴν αὐτὴν 5 a 18; μιμεῖσθαί γ' ἐθέλειν ἅπαντα 11 b 1; ἅπαντά πως διατίθησιν περὶ τὸν κόσμον 6 b 7
ἡ πάντων ἀρχή 4 b 15; ἀρχὴν μίαν πάντων 5 a 7; κατὰ πάντων τὸ εἶναι λέγομεν 8 b 2; οὐκ ἐπὶ πάντων ἁπλῶς θετέον 11 a 3; οἱ ἁπάντων ζητοῦντες λόγον 9 b 21

πάσχειν — τὸ ποιεῖν καὶ πάσχειν 7 b 22; τῷ πάσχειν δι' ἑτέρων 5 b 6

παύεσθαι — μὴ μέχρι του προελθόντα παύεσθαι 6 a 18; ἅμα τῷ πεπαῦσθαι 6 a 8

πειρᾶσθαι — πειρᾶται καὶ Ἑστιαῖος 6 b 9; πειρατέον λέγειν 4 b 7; πειρατέον ἐμφαίνειν 4 b 12; πειρατέον διελεῖν 9 a 24; πειρατέον λαμβάνειν 11 b 25

πειστικός — σαφεστέρως ἢ πειστικωτέρως 4 b 18

περ — see εἴπερ, ἐπείπερ, καίπερ, ὅσπερ

περί — + acc. περὶ τὰς ἀρχάς 6 b 17; περὶ τὰς τῆς φύσεως καὶ περὶ τὰς ἔτι προτέρας 9 b 20; περὶ τὰς τροφὰς καὶ γενέσεις 10 b 17

ἅπαντά πως διατίθησιν περὶ τὸν κόσμον 6 b 8; οὐκ ἔστιν ἀπάτη περὶ αὐτά 9 b 16

οἱ περὶ Σπεύσιππον 6 b 6; τὸ τίμιον τὸ περὶ τὴν τοῦ μέσου χώραν 11 a 24; ἐν τοῖς περὶ τὸ μέσον 5 b 12; τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν 7 b 1; τῶν περὶ τὴν γῆν 10 a 28; τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολάς 11 b 14; τὰ περὶ τὰς ὥρας τὰς ἐτησίους 7 b 3

+ gen. οἱ περὶ τῆς ὅλης οὐσίας λέγοντες 11 a 22; (οὐ) περὶ τῶν πρώτων μόνον 6 b 10; (λόγος) περὶ τῆς ἐφέσεως 5 a 15; τὸ περὶ τῆς ἠρεμίας 7 b 10; τούτων πέρι σκεπτέον 11 b 24; τοῦ οὐρανοῦ πέρι καὶ τῶν λοιπῶν οὐδεμίαν ποιοῦνται μνείαν 6 b 4

περιεργία — ἔχειν ἀπορίαν, εἰ μὴ ἄρα περιεργίαν τοῦ ζητεῖν 8 a 22

περίοδος — (ἐν τάξει καὶ λόγῳ) περιόδοις 7 a 13

περιτιθέναι — σχήματά τε καὶ μορφὰς καὶ λόγους περιτιθέντων 4 a 23; ⟨τὸ⟩ τοὺς λόγους ἑκάστοις περιθεῖναι 7 a 20; [6 b 7]

περιττός — ἐν ὀλίγοις καὶ περιττοῖς 4 b 10

περιφορά — πότερον ἡ περιφορὰ τῆς οὐσίας ἐστίν 6 a 7; ἐν τῇ περιφορᾷ κατὰ τὴν οὐσίαν 10 a 14; οἷον ζωή τις ἡ περιφορὰ τοῦ παντός 10 a 16; τῷ αὐτομάτῳ καὶ τῇ τοῦ ὅλου περιφορᾷ 10 b 28; συμβαίνει οἷον κατὰ συμβεβηκὸς ὑπὸ τῆς κυκλικῆς περιφορᾶς 5 b 25

πίστις — χαλεπὴ ἡ σύνεσις καὶ ἡ πίστις 9 b 17

πιστός — ἔοικεν ὁ λόγος ἔχειν τι πιστόν 10 b 27

πλεονάκις — καθάπερ πλεονάκις λέγεται 10 a 24

πλεοναχῶς — πλεοναχῶς ὄντος τὸ ἐπίστασθαι 9 a 10; (οὐχ) οἷόν τε καθόλου καὶ κοινόν τι λαβεῖν ἐν τοῖς πλεοναχῶς λεγομένοις 9 b 1

πλῆθος — τὸ κατὰ τὸ πλῆθος τῶν σφαιρῶν 5 a 21-2; πολὺ πλῆθος τὸ κακόν 11 a 19-20

πλήν — πλὴν ἴσως 8 a 3; οὐθεὶς πλήν 6 b 6; πλὴν εἰ 7 a 22; 11 b 21; πλὴν ὅσον 6 a 27

πόθεν — πόθεν ἄρξασθαι 10 a 24

ποιεῖν — (ὅπερ) ποιεῖν Εὔρυτον 6 a 20; τὸ ποιεῖν καὶ πάσχειν 7 b 21

ποιητέον τὸν ὅρον 9 b 19; παράδειγμα ποιοῦνται 7 b 3; ἀντίθεσίν τινα ποιοῦσιν 11 b 2; ποιοῦνται μνείαν 6 b 5

ἀρχὴν ποιῶν μίαν πάντων 5 a 7; τὴν ἀόριστον δυάδα ποιοῦντες 6 a 25; μὴ ποιοῦσιν (sc. τὸ μὴ ἔχειν λόγον) 10 b 25; σπάνιόν τι τὸ τίμιον ποιεῖ 11 a 24

ποιητός — ἐν τοῖς πρακτοῖς καὶ ποιητοῖς 9 a 3-4

ποικιλία — μορφάς τε παντοίας καὶ ποικιλίας γίνεσθαι 7 b 1

ποιός — τὸ μήτε τόδε μήτε ποιὸν μήτε ποσόν 8 a 18

ποῖος — ποία καὶ τίνων 5 a 15; πῶς καὶ ποίας 6 b 23; πῶς καὶ ποίοις 4 a 2; τίς ἡ φύσις καὶ ἐν ποίοις 4 a 18; εἰς ποῖα τελευτᾶν 10 a 25

πόλις — ὡς ἂν πόλις ἢ ζῷον ἢ ἄλλο τι τῶν μεριστῶν 8 a 5

πολλαχῶς τὸ ὂν ὅτι πολλαχῶς 8 b 10
πολύς οἱ πολλοί 6 a 23; πολλῷ πλεῖον 11 a 15; 8 a 25; πολὺ πλῆθος 11 a 19; πολὺ τὸ οὐχ ὑπακοῦον 11 a 14; πολλὰ ... τοιαῦτα 11 b 16; πολλὰ καὶ ὡς ἔτυχεν 11 b 13
αἱ ἀρχαὶ πλείους 5 a 19; τίνες, εἰ πλείους 4 b 11; πλείω τὰ κυκλικά 5 a 15; καὶ ἕτερα δὴ πλείω 6 b 4; πλειόνων ὄντων τῶν ὑπὸ τὰ καθόλου 8 b 18; ἐν τοῖς περὶ τὴν γῆν πλείοσιν 10 a 28; ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν 8 b 24; λόγου δεῖται πλείονος 5 a 14
τὸ πλέον ἀδύνατον 7 b 8; πλέον τὸ τεταγμένον 11 b 21; μᾶλλον δὲ καὶ πολλῷ πλέον 8 a 25; μᾶλλον δὲ πολλῷ πλεῖον 11 a 16; ἔτι πλέονι τῷ παραδόξῳ χρώμενοι 8 b 6; ζητούντων ἐπὶ πλέον 8 b 16
ὡς ἂν ἀπέχοντες πλεῖστον 9 a 8; διὰ πλείστου 9 a 7
πολύχους πολυχουστέρα καὶ ἀτακτοτέρα 4 a 3-4
πομφόλυξ ἐν αὐτῇ πομφόλυγι 7 a 22
ποσαχῶς πόσοι τρόποι καὶ ποσαχῶς τὸ εἰδέναι 9 a 24
ποσός μήτε ποιὸν μήτε ποσόν 8 a 18; ποσόν τι 5 a 8
πόσος μέχρι πόσου 7 b 7; 9 b 2; πόσοι τρόποι 9 a 23
ποτε ποτ' ἔφη 6 a 20; πῶς ποτε 5 a 24; 6 b 23; 8 a 8; τί δή ποτε 8 a 22
πότερος πότερον ... ἢ 4 b 7; 5 b 13; 6 a 7; 6 b 24; 8 a 10; πότερα ... ἢ 4 a 9; 5 b 19-20
που ἐνταῦθά που 7 b 6
πραγματεία τὰς καθ' ἕκαστα πραγματείας 9 b 18
πρακτός ἐν τοῖς πρακτοῖς καὶ ποιητοῖς 9 a 3
προαιρεῖσθαι οὐδ' ἂν προέλοιτο 11 b 10
προβαίνειν κἂν μὴ δύνηται προβαίνειν (ἡ διάνοια) 8 b 14
πρόεσις τοῖς θήλεσιν ἡ πρόεσις 10 b 9
προιέναι μέχρι του προελθόντα 6 a 18
πρός πρὸς τὰ φωτεινότατα βλέπειν 9 b 13; αἱ ὀρέξεις πρὸς ἕκαστον 5 b 4; πρὸς τὸ ἕνεκά του συνάγοντας 7 a 21; πρὸς αὐτὸν τὸν πρῶτον οὐρανὸν ἀναφέρων 6 a 6; ὑποβαίνοντι πρὸς τὰ ἄλλα 10 a 4; ἡ ἀρχὴ πρὸς αὐτὰ ταῦτα 9 a 25; πρὸς τὰς ... πραγματείας ἀναγκαῖον 9 b 18; συνάπτει πρὸς τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν 10 a 20
πῶς ἔχει πρὸς ἄλληλα 12 a 2; πρὸς ἄλληλα διαφοράς 10 b 28- 11 a 1; κοινωνία πρὸς ἄλληλα 4 a 10; ἡ πρὸς ἄλληλα θέσις 10 a 2; πρὸς ἄλλοτ' ἄλλο μεταβολαί 10 b 3; πρὸς ἄλλοτ' ἄλλο μεθισταμένων 10 b 5
προσκατ-αριθμεῖν προσκαταριθμοῦσιν εἰς τὴν τοῦ παντὸς φύσιν 8 b 7-8
πρότερος τὰ μὲν πρότερα τὰ δ' ὕστερα 4 a 15; προτέρα καὶ κρείττων 4 b 6; δυνάμει κρείττονι καὶ προτέρᾳ 5 a 2; προτέραν καὶ τιμιωτέραν 7 b 14; προτέροις καὶ τιμιωτέροις 10 b 25-6; εἰ μὴ ἄρα καὶ πρότερα τούτων 11 b 19; τὰς ἔτι προτέρας (sc. πραγματείας) 9 b 21
πρότερον ζητήσειεν ἄν τις 5 b 19
προχώρησις αἱ προχωρήσεις 10 b 1-2
πρῶτος ὁ πρῶτος λόγος 7 b 9; τὸν πρῶτον οὐρανόν 6 a 6; πρώτη καὶ μάλιστα 5 b 9; ἀρχὴ καὶ πρῶτον 9 a 25; πρῶτον καὶ κυριώτατον 4 b 5; οὐκ ἂν εἴη πρῶτον 7 b 17
τὸ πρῶτον 5 b 8; τὸ πρῶτον καὶ θειότατον 6 a 1; ἐν τῷ πρώτῳ 4 b 11; τοῦ πρώτου 5 b 14; παρὰ τοῦ πρώτου 5 b 27; ἡ τῶν πρώτων (sc. θεωρία) 4 a 5; τὴν ὑπὲρ τῶν πρώτων θεωρίαν 4 a 3; περὶ τῶν πρώτων μόνον 6 b 11; τὰ

	πρῶτα καὶ νοητά 9 a 12; τὰ ἄκρα καὶ πρῶτα 9 b 10; τὰ πρῶτα κινοῦντα 10 a 1; ἐν τοῖς πρώτοις τῆς φύσεως 10 a 6; πρώτοις καὶ ἐν τῷ πρώτῳ 4 b 10
	first bodies ἐν τοῖς πρώτοις 11 b 13
πῦρ	ὅσοι πῦρ καὶ γῆν 6 b 25
πώγων	πώγωνος ἔκφυσις 10 b 10
πως	συνεργοῦντα δέ πως 4 a 12; συνάπτει δέ πως 10 a 19; ἰδίᾳ πως 8 b 26; ὁμογενῆ πως 9 a 18; ἅπαντά πως 6 b 7; ἀμῶς γέ πως 4 b 12
πῶς	πῶς ἔχει 5 b 19; πῶς ἔχει πρὸς ἄλληλα 12 a 2; πῶς μέρη 5 b 21; πῶς ποτε 5 a 23; 8 a 8; πῶς ... ποτε χρὴ 6 b 23; πῶς ... δεῖ 4 a 2; πῶς ... μεταδιωκτέον 9 a 10
ῥᾴδιος	ῥᾴδιον τὸ οὕτως ἀποδοῦναι 4 b 17; ὁ ἀφορισμὸς οὐ ῥᾴδιος 10 a 23; οὐ ῥᾴδιον εἰπεῖν 9 b 2
σάρξ	[7 a 14]
σαφής	σαφεστέρως ἢ πειστικωτέρως 4 b 17-8
σεμνός	σεμνοτέραν καὶ μείζω 4 a 8
σκέπτεσθαι	τούτων πέρι σκεπτέον 11 b 24
σκέψις	ζητεῖ τὴν σκέψιν 7 b 6
σοφία	ὑπερβατός τις σοφία 8 b 9
σπάνιος	σπάνιόν τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν 11 a 18-9; σπάνιόν τι τὸ τίμιον ποιεῖ 11 a 23
στέρησις	ἀργία καὶ στέρησίς τις κινήσεως 7 b 12
συμβαίνειν	συμβαίνει τοὐναντίον 6 b 17-8; συμβαίνει γίνεσθαι 7 a 23; ἀναιρεῖσθαι συμβήσεται 11 b 11; συμβαίνει οἷον κατὰ συμβεβηκός 5 b 23-4; καθ' ἑαυτὰ καὶ οὐ κατὰ συμβεβηκός 8 b 23; κατὰ συμβεβηκός opp. τῆς οὐσίας 6 a 9-10
συμβάλλεσθαι	ὥσπερ μάταια (εἴπερ μὴ συμβάλλεται) 10 b 9
σύμπας	see πᾶς
σύμπτωμα	συμπτώματα καὶ δι' ἑτέρας ἀνάγκας 10 b 18
συμπτωματικῶς	τὰ μὲν συμπτωματικῶς τὰ δ' ἀνάγκῃ τινί 10 a 26
σύμφυτος	σύμφυτον αὐτῷ τὸ ὀρέγεσθαι 6 a 10
σύμφωνος	ὅτι μάλιστα σύμφωνον ἑαυτῷ 8 a 4; τὸ σύμφωνον αὐτῶν 5 a 20
συνάγειν	πρὸς τὸ ἕνεκά του συνάγοντας 7 a 21
συνακολουθεῖν	συνακολουθεῖ τὰ μετὰ τὰς ἀρχάς 7 a 3; οὐ συνακολουθεῖ (ἡ ὄρεξις τῶν ἄλλων) 8 a 2
συνάπτειν	οὐχ ὥστε συνάπτειν τοῖς τῆς φύσεως 4 b 2; συνάπτει τοῖς αἰσθητοῖς 4 b 19; συνάπτει ἡ νῦν ἀπορία καὶ πρὸς τὴν ... κίνησιν 10 a 19
συναυδᾶν	δοκεῖ ἡ αἴσθησις τρόπον τινὰ συναυδᾶν 7 b 20
συναφή	συναφή τις καὶ οἷον κοινωνία (τοῖς τε νοητοῖς καὶ τοῖς τῆς φύσεως) 4 a 9-10; εἶναί τινα συναφὴν καὶ μὴ ἐπεισοδιῶδες τὸ πᾶν 4 a 14; οὔτ' ἄγαν εὔσημος ἡ συναφὴ τοῖς αἰσθητοῖς 4 a 20
συνεργεῖν	συνεργοῦντα πως εἰς τὴν πᾶσαν οὐσίαν 4 a 12; ἀστρολογία συνεργεῖ 10 a 6
σύνεσις	ἡ σύνεσις καὶ ἡ πίστις 9 b 17
συνεχής	ἡ κυκλικὴ ἡ συνεχὴς καὶ ἄπαυστος 5 a 3
συνορᾶν	τὸ ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν ἐπιστήμης 8 b 24-5
σφαῖρα	τὸ πλῆθος τῶν σφαιρῶν 5 a 22

σχεδόν	σχεδὸν ... πᾶσα 8 b 20; σχεδὸν τἆλλα 6 a 26; ἐν ταῖς λοιπαῖς σχεδόν 7 a 1; σχεδὸν ἰσομοιρεῖ 8 a 24
σχῆμα	σχήματά τε καὶ μορφὰς καὶ λόγους 4 a 22; τὰ μεγέθη καὶ τὰ σχήματα καὶ τὰς ἀποστάσεις 9 b 26
σῶμα	τὰ ἐπίπεδα καὶ τὰ σώματα 6 a 26
σωρός	σωρὸς εἰκῇ κεχυμένων (Heracl.) 7 a 14*
τάξις	ἡ τάξις καὶ τὸ ὡρίσθαι 6 b 28; ἔχειν τὴν τάξιν 11 b 18; τῇ ἑτέρων τάξει καὶ μεταβολῇ 7 a 23; ἐν τάξει καὶ λόγῳ 7 a 12
τάττειν	μέχρι πόσου τὸ τεταγμένον 7 b 7; ἐν τούτοις πλέον τὸ τεταγμένον 11 b 21; μεταδιδόναι τοῦ ἀεὶ καὶ τοῦ τεταγμένου 11 a 7
τάχα	τάχα μὲν οὖν 4 b 16; τάχα δέ 5 b 19; 6 a 2; 8 b 12; 9 a 21; 9 b 6; 9 b 13; τάχα δὲ καί 5 b 10; 6 a 16; 6 b 20; τάχα δ' οὐδέ 11 b 10; τάχ' ἂν 6 b 24; 8 a 15
τε	(Hom.) 5 b 17; τε καί (... καί) 4 a 22-3; 5 a 12; 5 a 28; τε ... καί (... καί) 4 a 10-1; 5 a 6-7; 5 a 26; 7 a 8; 7 b 1; 8 b 22; 9 a 13-4; 9 b 3-4; 10 a 1; 10 a 27; 10 b 12-3; τε γὰρ ... καί 8 b 21; ἄλλως τε καί 5 a 28; εἴ τε ... τε 8 b 17; εἴτε ... τε 5 a 19; ἐάν τε ... ἐάν τε 8 b 19-20 see also οἷόν τε (s.v. οἷον)
τέλεος	τελέου καὶ φρονοῦντος 6 a 19; ἐν ἀμφοῖν τὸ τέλεον 7 a 9; τέλεος ἡ ἐξ ἀμφοῖν (sc. ἐπιστήμη) 8 b 27; ἰσχυρότερα καὶ οἷον τελεώτερα τῶν ἐπιστημῶν 6 b 20; τελεώτατον 8 a 7
τελευτᾶν	εἰς ποῖα τελευτᾶν 10 a 25
τέλος	καθόλου τέλος 9 a 1; τὸ μὲν τέλος ἡ δ' ἡμετέρα τις ἀρχή 9 b 7
τέχνη	καθάπερ ἐν ταῖς τέχναις 8 a 12; κατ' ἀναλογίαν ληπτέον ἐπὶ τὰς τέχνας 8 a 20; κατὰ τὰς τέχνας ὁμοίως 7 a 4
τιθέναι	πρῶτον καὶ κυριώτατόν τινες τιθέασιν 4 b 5; (ἀρχὰς) ἃς ἄν τις τίθηται 6 a 17; ἐν νοητοῖς τιθέασιν (sc. τὴν τῶν πρώτων θεωρίαν) 4 a 7; ὡς αἰτίαν θετέον 4 b 21; οὐκ ἐπὶ πάντων ἁπλῶς θετέον 11 a 3
τίμιος	τὸ τίμιον τὸ περὶ τὴν τοῦ μέσου χώραν 11 a 23; τιμιώτερον γάρ 11 a 10-1; προτέραν καὶ τιμιωτέραν 7 b 14; προτέροις καὶ τιμιωτέροις 10 b 26; τοῖς τιμιωτάτοις 6 b 28; τὸ μέσον τιμιώτατον 11 a 12
τις	ἄν τις τίθηται; 6 a 17; ἐάν τις ἄγῃ 7 b 22; εἴ τις λαμβάνοι 11 b 21; λάβοι τις ἄν 10 b 16; εἰ μή τις λέγοι 5 b 1; καθάπερ εἴ τις 9 a 23 ζητήσειεν ἄν τις 5 b 19; 10 b 23; ἄν τις ἐπιζητήσειεν 5 b 11; ἄν τις ἀπορήσειεν 6 a 6; 7 b 10; τάχ' ἂν ἀπορήσειέν τις 6 b 24; ἄν τις ἀξιώσειεν 5 b 15; ἀξιώσειεν ἄν τις 6 a 16 ὥς γε δή τινές φασιν 4 a 4; καθάπερ τινές φασιν 4 a 19; 9 a 19; ὅνπερ πρῶτον καὶ κυριώτατόν τινες τιθέασιν 4 b 5; ὧν μέγιστόν τινες παράδειγμα ποιοῦνται 7 b 2; ὡς οἴονταί τινες 10 a 8 συναφή τις 4 a 10; ζωή τις 10 a 16; στέρησίς τις κινήσεως 7 b 12; διαφορά τις 8 b 18; διαφορᾶς τινος 8 b 17; διαιρέσεως τινός 9 a 20; ἀνάγκῃ τινί 10 a 27; 11 b 16; ἐφέσει τινί 6 a 9; δυνάμει τινί 4 b 14; δύναμίν τινα 8 a 19; ἀντίθεσίν τινα 11 b 2; τρόπον τινά 5 a 16; 7 b 20; 9 b 6; τρόπον τινὰ ἀφωρισμένον 10 a 19 ἑτέρα τις οὐσία 4 b 6; ὑπερβατός τις σοφία 8 b 9; ἡμετέρα τις ἀρχή 9 b 7; ἄλλῃ τινὶ δυνάμει 5 a 1; μικράν τινα διαφοράν 6 a 5; μείζω τινὰ αἰτίαν 7 b 19; κρείττω τινὰ μερίδα 5 a 9; ὡρισμένην τινὰ φύσιν 10 b 21 ποσόν τι 5 a 9; μία τις 4 b 7; ὀλίγον τι 11 a 16; σπάνιόν τι 11 a 19; 11 a

23; κάλλιόν τι 5 b 27; ὑπερβατόν τι 6 a 3; κοινόν τι 9 a 27; ἄδεκτόν τι 5 b 18; ἄλλο τι 8 a 6; ἄλλου τινός 6 a 22; ἄλλ' ἄττα 6 b 3; τοιαῦτ' ἄττα 6 a 11
τις ὁμοιότης 8 a 20; τι φῶς 8 b 15; τινὰ λόγον 8 a 8; τινὰ ὅρον 11 b 25; τινὰ διστασμόν 11 a 4; τινὰ συναφήν 4 a 13; τινὰς ψηφούς 6 a 20; τινὰς ἰδέας 10 b 28; τινὰς ὅρους 11 a 2; ἔν τισιν τόποις 10 b 11
τι ἴδιον 9 a 15; τι πιστόν 10 b 26; τι κατά τινος 8 b 23-4
μέχρι του 6 a 18; μέχρι τινός 6 a 23; 6 b 10; 9 b 8; τὸ ἕνεκά του 7 a 21; 10 a 22; 11 a 1; 11 b 27; τὸ τινὸς χάριν 11 b 15; κατά τινος 8 b 24

τίς — τίς ἡ φύσις 4 a 17; 10 a 2; τίς αὕτη (sc. ἡ οὐσία) 4 b 11; τίνες (αἱ οὐσίαι) 4 b 11
τί τὸ ἐπίστασθαι 9 a 26; τὸ τί ἦν εἶναι 8 b 22; τίνος ἕνεκα 10 a 28; 10 b 23; τίνος (sc. ἕνεκα) 10 b 1; τὸ τίνος ἕνεκα 10 a 1; ἐν τίνι ποιητέον τὸν ὅρον 9 b 19; τίνων 5 a 15; 9 b 3; ἐν τίσιν 12 a 1
τί why 5 a 25; τί δή ποτε 8 a 22; διὰ τί 5 b 11; 7 b 8

τοιόσδε — τὰ τοιάδε 8 a 8; 11 a 3

τοιοῦτος — ὁ τοιοῦτος λόγος 8 a 27; τοιαύτη ἡ τοῦ ὀρεκτοῦ φύσις 5 a 2; τοιαύτης οὔσης τῆς ἀρχῆς 4 b 18; ἡ κυκλικὴ τοιαύτη 5 b 23; τοιαύτας τὰς μορφάς 11 b 21-2; μηθὲν τοιοῦτον 7 a 14; τοιαῦτ' ἄττα τῶν ὄντων 6 a 11; πολλὰ τοιαῦτα 11 b 17; ἕτερα τοιαῦτα 10 b 16; τῶν τοιούτων ἡ θεωρία 9 b 14

τόπος — τόπος καὶ κενὸν καὶ ἄπειρον 6 b 1; εἰς τοὺς τόπους 5 b 25; ἔν τισιν τόποις 10 b 11

τοσοῦτος — τοσοῦτο μόνον 6 a 27-8

τρόπος — ὁ οἰκεῖος τρόπος 9 a 12; ἴδιος ὁ τρόπος 9 a 20; ὁ τρόπος οὐ φυσικός 10 a 8; πόσοι τρόποι 9 a 23-4; τρόπον τινά 5 a 16; 7 b 19; 9 b 6; 10 a 19

τροφή — τὰς τροφὰς καὶ γενέσεις τῶν ζῴων 10 b 17

τυγχάνειν — τυγχάνει 6 a 22; καλῶς ἔτυχεν ὄντα 11 a 25; ὡς ἔτυχεν 11 b 14

ὑγρότης — ἀναξηράνσεις καὶ ὑγρότητες 10 b 2-3

ὕλη — ὁ μερισμὸς εἰς ὕλην καὶ μορφήν 8 a 9; τὰς τῆς ὕλης (sc. ἀρχάς) 7 a 8; ἐν ἀοριστίᾳ καὶ οἷον ὕλης εἴδει 11 a 21

ὑλικός — τὰς ὑλικάς (sc. ἀρχάς) 7 a 7

ὑπακούειν — τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον τὸ εὖ 11 a 15

ὑπάρχειν — δοκεῖ ὑπάρχειν 5 b 3; οὐθὲν κωλύει ὑπάρχειν 6 a 11-2; οὐθὲν ἂν ἧττον ἀληθὲς ὑπάρχοι 8 a 16; μὴ ὑπαρχούσης 8 a 17

ὑπεναντίος — αἱ φοραὶ τρόπον τινὰ ὑπεναντίαι 5 a 16

ὑπέρ — τὴν ὑπὲρ τῶν πρώτων θεωρίαν 4 a 2; ὑπὲρ αὐτῆς τῆς κινήσεως ἀπορεῖν 6 a 13; ὑπὲρ τοῦ πάνθ' ἕνεκά του ... ὁ ἀφορισμὸς οὐ ῥᾴδιος 10 a 22

ὑπερβατός — ὑπερβατόν τι καὶ ἀζήτητον 6 a 3; ὑπερβατός τις σοφία 8 b 9

ὑπερέχειν — ἰσομοιρεῖν ἢ καὶ ὑπερέχειν 11 b 6

ὑπεροχή — δυνάμει τινὶ καὶ ὑπεροχῇ τῶν ἄλλων λαμβάνειν 4 b 14

ὑπό — + acc. τὰ κινητὰ καὶ ὑπὸ τὴν φύσιν 9 a 13; ὑπὸ τὰς ἀρχάς 4 a 16; τῶν ὑπὸ τὰ καθόλου 8 b 18
+ gen. ὑπὸ τῆς κυκλικῆς περιφορᾶς 5 b 24; τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν 10 a 20

ὑποβαίνειν — ὑποβαίνοντι πρὸς τὰ ἄλλα 10 a 3

ὑποβάλλειν — (ἡ αἴσθησις) ὑποβάλλει τῇ διανοίᾳ 8 b 12

ὑποκεῖσθαι — τὸ ὑποκείμενον 9 a 9

ὑπολαμβάνειν — τὸν οὐρανὸν ἀίδιον ὑπολαμβάνουσιν 9 b 24-5

ὑποτιθέναι	τὰς μορφὰς οἵας Δημόκριτος ὑποτίθεται τῶν ἀτόμων 11 b 22-3; πῶς χρὴ καὶ ποίας τὰς ἀρχὰς ὑποθέσθαι 6 b 23-4
ὕστερος	τὰ μὲν πρότερα τὰ δ' ὕστερα 4 a 15
ὑψηλός	ἐν ὑψηλοτέρῳ τε καὶ ἀληθινωτέρῳ λόγῳ 5 a 12
φαίνεσθαι	οὔθ' ὅλως ἀξιόχρεα φαίνεται 4 a 21; φαίνεται ἔχειν οὕτω 7 a 1; φαίνεται πολλὰ καὶ ὡς ἔτυχεν 11 b 12
φάναι	φησίν 5 b 16; 6 b 27; 7 a 15; φασίν 5 a 26; 5 a 28; 8 a 7; ὡς ... τινές φασι 4 a 3; καθάπερ τινές φασιν 4 a 19; 9 a 19; ἔφη 6 a 20
φανερός	φανερὸν ὡς 4 b 22-3; (τὸ σύμφωνον) οὐθαμῶς φανερόν 5 a 21; τὸ ὂν ὅτι πολλαχῶς, φανερόν 8 b 10
φάρυγξ	τὸ ἔμπροσθεν τὴν φάρυγγα τοῦ οἰσοφάγου 11 a 10
φθαρτός	ὥσπερ καὶ τὰ ἀίδια τῶν φθαρτῶν 4 a 16
φθείρω	(εἰ ...) φθείροι ἂν τὸν οὐρανόν 6 a 14; φθείροιτ' ἂν (ὁ πρῶτος οὐρανός) 6 a 8
φθορά	φθοραὶ καὶ γενέσεις 10 b 4
φορά	ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις τὴν φοράν 10 a 18; αἱ φοραὶ τρόπον τινὰ ὑπεναντίαι 5 a 16; τὰ κατὰ τὰς φοράς 9 b 25
φρονεῖν	ἡ εἰς τὸ ἄπειρον ὁδὸς ἀλλοτρία καὶ ἀναιροῦσα τὸ φρονεῖν 9 b 5; τελέου καὶ φρονοῦντος 6 a 19
φύειν	οὐκ ἔστιν οὐδὲ πέφυκεν 9 b 24
φυσικός	ὁ τρόπος ... οὐ φυσικὸς (ἢ οὐ πᾶς) 10 a 8; φυσικὴν ὄρεξιν 5 a 24
φύσις	ἡ φύσις καὶ ἡ ὅλη οὐσία τοῦ παντὸς 8 a 22; ἡ φύσις (ὡς ἁπλῶς εἰπεῖν) ἐν κινήσει καὶ τοῦτ' αὐτῆς τὸ ἴδιον 4 b 20; τὸ κινεῖσθαι ἁπλῶς τῆς φύσεως οἰκεῖον 10 a 10; τὴν φύσιν ἐν ἅπασιν ὀρέγεσθαι τοῦ ἀρίστου 11 a 5; τὴν φύσιν μιμοῦνται 7 a 5; ἐν τῇ φύσει 11 b 26
	ἡ τῆς φύσεως (θεωρία) 4 a 3; τὰς τῆς φύσεως (sc. πραγματείας) 9 b 20; τοῖς τῆς φύσεως 4 a 11; 4 b 3; 4 b 23 – 5 a 1; 11 a 21; ἐν τοῖς πρώτοις τῆς φύσεως 10 a 6; τὰ κινητὰ καὶ ὑπὸ τὴν φύσιν 9 a 13
	ἡ φύσις αὐτῶν (sc. τῶν νοητῶν) 4 a 17; ἡ τοῦ ὀρεκτοῦ φύσις 5 a 2-3; τὴν τοῦ παντὸς φύσιν 8 b 8; τὴν τοῦ ὅλου φύσιν 11 b 6; ἡ φύσις ἑκάστου 10 a 2; ἑκάστων αἱ φύσεις 7 a 18
	ὡρισμένην τιν' ἔχουσι φύσιν 10 b 22; ἀρχῆς φύσιν ἐχούσας 4 b 9; οὐδεμίαν ἔχει φύσιν 4 b 2
	βίᾳ ἢ παρὰ φύσιν 10 b 14
φυτόν	καὶ ζῴων καὶ φυτῶν καὶ καρπῶν γενέσεις 7 b 4; ἄχρι ζῴων καὶ φυτῶν 10 a 5; μέχρι ζῴων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων 9 a 14; (οἷον) ζῴοις φυτοῖς 8 b 27; ἐν (τοῖς) ζῴοις καὶ φυτοῖς 7 a 22; 10 a 13; ἐν τοῖς φυτοῖς καὶ μᾶλλον τοῖς ἀψύχοις 10 b 20-1
φῶς	ἐμφαίνεταί τι φῶς ἐν τῷ μὴ φωτί 8 b 15
φωτεινός	ὥσπερ πρὸς τὰ φωτεινότατα βλέπειν 9 b 13
χαλεπός	χαλεπὴ (ἡ σύνεσις καὶ ἡ πίστις) 9 b 16; χαλεπὸν δέ 4 b 17; 7 a 19; χαλεπώτερον δ' ἂν δόξειεν 9 a 26
χάριν	τὸ τινὸς χάριν 11 b 15; οὗ χάριν 5 a 17; κόσμου χάριν 11 a 13; τούτων χάριν 10 b 19-20
χεῖν	σωρὸς εἰκῇ κεχυμένων (Heracl.) 7 a 14
χείρων	σχεδὸν ἰσομοιρεῖ τὸ χεῖρον τῷ βελτίονι 8 a 24; εἰς τὸ χεῖρον ἡ μετάβασις 7 b 8

χρᾶσθαι ἔτι πλέονι τῷ παραδόξῳ χρώμενοι 8 b 6
χρή χρὴ ὑποθέσθαι 6 b 23; πόθεν ἄρξασθαι χρή 10 a 24
χρόνος χρόνον ἅμα καὶ οὐρανόν 6 b 3
χώρα τὴν τοῦ μέσου χώραν 11 a 23; (ἀπεωσμένα τῶν ἐντιμοτάτων) κατὰ τὰς χώρας 5 b 22
χωρίζειν χωριζόμενος ὁμώνυμος 10 a 15; ὥσπερ ἑκάτερα κεχωρισμένα 4 a 12
χωρίς οὐκ ἂν γένοιτο χωρὶς ἐσθλά (Eur.) 8 a 27

ψῆφος διατιθέντα τινὰς ψήφους 6 a 20-1
ψυχή 6 b 2; ἡ ἔφεσις μετὰ ψυχῆς 5 b 1; (αἱ αἰσθήσεις) ἐν ψυχῇ γίνονται 5 b 7; ψυχὴ ἅμα δοκεῖ καὶ κίνησις ὑπάρχειν 5 b 3; ἡ τῆς ψυχῆς (κίνησις) 5 b 9

ὡδί (μηδ' ...) τὴν ζωὴν ἢ ὡδὶ ζητητέον 10 a 17
ὥρα τὰ περὶ τὰς ὥρας τὰς ἐτησίους 7 b 3
ὡς λέγειν ὡς 6 a 21; 8 a 26; τὸ λεχθέν, ὡς 8 a 1; ὁ λόγος, ὡς 10 b 27; ἀληθέστερον εἰπεῖν ὡς 8 b 12; ἀληθέστερον ὡς 9 b 14; συναυδᾶν ὡς 7 b 20; τὸ δοκοῦν, ὡς 8 b 4; δῆλον ὡς 4 b 21; φανερόν ὡς 4 b 23
ὡς ... φασίν 4 a 4; ὡς οἴονταί τινες 10 a 8; ὡς ἔτυχεν 11 b 13
κατὰ τοὐλάχιστον ὡς εἰπεῖν 7 a 16; ἑκάστων αἱ φύσεις ὡς εἰπεῖν 7 a 18; πᾶσα ὡς εἰπεῖν 11 b 4; ἡ φύσις ὡς ἁπλῶς εἰπεῖν ἐν κινήσει 4 b 20
ὡς ἂν πόλις 8 a 5; 9 a 7; καὶ ὡς ἔνια δή 10 b 14; ὡς δ' αὐτὰ καὶ ἐπὶ τῶν ζῴων ὁμοίως 11 a 7
ὡς ἀργία καὶ στέρησίς τις κινήσεως 7 b 12; ὡς τὸ μὲν ὄν, τὸ δὲ μὴ ὄν 8 a 10; ὡς ἐν ἀμφοῖν 7 a 8; ὡς ἀδύνατον 7 b 16; ὡς ἀδύνατα 5 b 13; ὡς ἀόριστον 8 a 18; ὡς βέλτιον 7 b 11; ὡς προτέραν καὶ τιμιωτέραν 7 b 14; ὡς ἀκινήτοις καὶ ἀμεταβλήτοις 4 a 7
ὡς οὐ διικνουμένου 5 b 13; ὡς εἰς τὸ ἀμερὲς ἄγοντας 8 a 3; ὡς δέον 6 b 26
ὡσαύτως ὡσαύτως δέ 6 b 5; 11 a 13; ἀεὶ κατὰ ταὐτὰ καὶ ὡσαύτως 10 b 20
ὥσπερ ὥσπερ ὁ ἐρῳδιὸς ὀχεύει 10 b 14; ὥσπερ Σπεύσιππος σπανιόν τι ποιεῖ 11 a 23
ὥσπερ ἂν εἰ τὸν θεόν 4 b 15; ὥσπερ εἴρηται 6 b 10; ὥσπερ δοκοῦσιν 10 b 22
ὥσπερ ὅσοι πῦρ καὶ γῆν 6 b 25
ὥσπερ καὶ τὰ ἀίδια τῶν φθαρτῶν 4 a 16; ὥσπερ καὶ τοῖς ζῴοις 5 b 5; ὥσπερ καὶ ἐν τοῖς μαθηματικοῖς 9 a 16
ὥσπερ ἄδεκτόν τι 5 b 18; ὥσπερ ἑτέρων λόγων 6 a 14; ὥσπερ πρὸς τὰ φωτεινότατα βλέπειν 9 b 12; ὥσπερ μάταια 10 b 7-8; ἢ οὐδεμίαν ἀλλ' ὥσπερ ἑκάτερα κεχωρισμένα 4 a 11-2; μηθὲν τοιοῦτον ἀλλ' ὥσπερ "..." 7 a 14
ὥστε ὥστε λύοιτο ἄν 5 a 4; ὥστε οὐθαμῶς φανερόν 5 a 20
ὥστε δοκεῖν 8 a 25; οὐχ ὥστε συνάπτειν ὥστ' ἐμποιῆσαι 4 b 2-3

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Ἑστιαῖος 6 b 10
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Εὔρυτος 6 a 20

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